NHS National Services Scotland

SEAN Annual Report 2016.

A summary of ECT in Scotland for 2015.

Report prepared by
Scottish ECT Accreditation Network

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Summary Hospital Activity Table 2015[1]

Hospital	Patients	Episodes	Treatments for episodes commencing in 2015[8]	All Treatments Delivered in 2015[9]	Stimulations	Median Treatments per Episode	Median Stimulations per Episode
Ailsa & Crosshouse	23	25	203	205	217	7	8
Argyll & Bute	12	20	162	142	187	8	9
Carseview	13	14	118	131	126	9	9
Forth Valley Royal	13	14	120	147	167	9	13
Hairmyres[2]	11	12	101	105	126	8	11
Huntlyburn House	*	12	107	100	131	8	10
Inverclyde	15	15	149	264	153	9	9
Leverndale[3]	28	30	315	325	347	10	11
Midpark Hospital	15	22	173	175	184	8	8
Murray Royal	21	25	272	257	301	10	11
New Craigs	*	*	71	71	86	9	10
Queen Margaret[4]	23	36	333	337	362	11	12
Royal Cornhill	58	66	596	611	712	9	11
Royal Edinburgh[5]	40	45	483	658	625	10	12
St John's	18	27	257	251	279	8	10
Stobhill[6]	35	47	413	405	453	9	10
Susan Carnegie	10	13	129	144	149	9	10
Wishaw[7]	15	17	164	148	199	10	12
Total	**367**	**448**	**4,166**	**4,476**	**4,804**	**9**	**10**

Notes:

* Indicates values that have been suppressed because of the risk of disclosure.

1. In order to prevent rates being skewed by continuation/maintenance episodes administered by hospitals, medians are presented in the above table.
2. Includes patients from Udston Hospital.
3. Includes patients from Western Isles Hospital, Royal Alexandra Hospital, Dykebar Hospital and Southern General Hospital.
4. Includes patients from Stratheden Hospital and Whyteman's Brae Hospital (from November 2011 onwards).
5. Includes patients from Midlothian Community Hospital.
6. Includes patients from Vale of Leven, Parkhead and Gartnavel Royal Hospitals.
7. Includes patients from Monklands Hospital, Coathill Hospital, Beckford Lodge and Airbles Road Centre.
8. Treatments in this column are associated with episodes that commenced in 2015. These treatments may have occurred during 2015 or 2016.
9. A number of treatments may be associated with episodes that began in years prior to the year to which the majority of this annual report relates (2015). We have included this information as an extra column to recognise these further treatments that occurred during 2015.

Contents

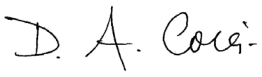
Foreword by Dr Denise Coia

I am delighted to be asked, once again to provide the foreword for the Scottish ECT Accreditation Network's (SEAN) eighth annual report. SEAN continues to be a major influence in ensuring the continued high quality and safe delivery of ECT services throughout Scotland.

As chairperson of Healthcare Improvement Scotland, the organisation with primary responsibility for ensuring the delivery of ongoing health care improvement in Scotland – it is reassuring to see how SEAN works towards maintaining evidence based standards and driving improvements in the quality of ECT services across the whole country. In doing so SEAN remains committed to working along the lines of the key principles of the Healthcare Quality Strategy to ensure that ECT Services are patient centred, safe, effective and equitable. Their commitment to providing quality services in line with these principles is illustrated throughout this annual report.

SEAN continues to monitor and ensure the provision of high quality ECT services throughout Scotland through its regular cycle of Accreditation Visits to all centres where ECT is delivered and by working closely with all disciplines involved in the clinical administration of ECT. Through SEAN Service User & Carer Reference Group it is able to get person centred feedback and continues to drive improvements from a patient and carer perspective.

Throughout its work SEAN continues to flourish and safeguard the positive aspects of patient care in this highly specialised and at times controversial treatment. This in itself will work towards reassuring the public at large that this is a safe and efficacious treatment which is closely monitored. This success is a testament to the enthusiasm and commitment of all those within SEAN and we are happy to support the continuing work and wish them ongoing success for the future. I am sure you will find this report interesting and informative.



Dr Denise Coia
Chairman, Healthcare Improvement Scotland
November 2016

Foreword by Dr Alistair Hay

This is the eighth annual report of the Scottish Electroconvulsive Therapy (ECT) accreditation network (SEAN) since we came under the auspices of the Information Services Division (ISD) of the NHS National Services Scotland.

The main aim of SEAN continues to be to monitor the practice of ECT throughout the 19 centres in Scotland where the treatment is currently administered. In doing so we aim to maintain, monitor and, where appropriate, improve the already high quality ECT treatment that is currently provided throughout Scotland. This is achieved through a series of accreditation visits to all the centres where ECT is administered. The standards of care in each centre are measured against recognised, measurable and achievable quality standards. In doing so, SEAN adheres to the principles outlined in the Healthcare Quality Strategy[1] in its vision healthcare delivery for NHS Scotland as outlined below:

Patient-Centred

- There continues to be active input from service users and carers through an independent reference group
- Issues highlighted from this group are fed into the SEAN Steering group and acted on as appropriate
- SEAN actively encourages service users and carers to contribute to its practice and their views are always listened to and taken seriously
- Users and carers are warmly encouraged to attend and participate in the SEAN annual clinical conference
- A report from the reference group is included in this and previous annual reports

Safe

- SEAN remains committed to onsite accreditations, the second round of which have just been completed
- In addition to formal accreditation visits, SEAN is undertaking unannounced visits to all centres to further monitor and ensure the quality of practice
- Ongoing evaluation of critical incidents

Effective

- SEAN uses validated outcome measures i.e. the Montgomery Asberg Depression Rating Scale (MADRS[2]) and the Clinical Global Improvement scale (CGI[3])
- Nurse education (through the Committee of Nurses at ECT in Scotland (CONECTS)) and the online Learnpro modules currently being introduced
- In September 2015 SEAN ran the first training course for psychiatrists who prescribe ECT. The course received excellent feedback and we plan to run these courses annually.

Equitable

- All clinics are accredited against a set of national evidence based standards to ensure that care is delivered to an equally high standard in all geographic areas across Scotland.

In addition to actively monitoring and improving standards through our accreditation visits, SEAN network encourages and facilitates both formal and informal multidisciplinary interaction amongst professionals clinically involved with ECT. There is an opportunity to meet and hear about recent advances through SEAN annual conference. This has led on to more informal multidisciplinary contacts through which examples of good practice can be disseminated, often through the NHS e-mail system.

We would welcome any comments and feedback on this report.

Dr Alistair Hay
SEAN Chairman and Clinical Lead
November 2016

Background

In 1996 the Scottish Electroconvulsive Therapy (ECT) Audit Network (SEAN) instigated a national audit project to answer questions pertaining to the clinical practice of ECT including facilities, staffing, training and the outcome of treatment. The initial audit was paper based and funded by the then Clinical Resource Allocation Group (CRAG). The audit ran for three years and was published in 2000[4]. Since then, SEAN has continued to grow and has developed into a national clinical network moving from an audit of the service to an accreditation network whilst retaining the acronym SEAN. The membership of SEAN comprises:

- Consultant Psychiatrists
- Consultant Anaesthetists
- Clinical Psychologists
- ECT Nurses
- Operating Department Practitioners
- Recovery Nurses
- Carers
- Users

In 2008 SEAN came under the auspices of NSS Information Services Division (ISD) and a new multidisciplinary group was formed with representation from professionals involved in the delivery of ECT services, the Scottish Government and the Mental Welfare Commission for Scotland.

SEAN has always encouraged user and carer involvement as it has aspired to deliver the “patient centred” services described in the Healthcare Quality Strategy for NHS Scotland[1]. In doing so the network has invited input from a number of user led organisations as it strives to maintain its patient centred focus. In 2009 a Service Users and Carers Reference Group was established. This user led group works autonomously, with SEAN covering the costs of meetings and travel expenses for up to 20 representatives. In addition SEAN encourages user involvement in the non-academic part of their annual conference which is free to service users and carers.

Again, in keeping with the Healthcare Quality Strategy for NHS Scotland, SEAN aspires to the “Safe” principles outlined in this document. This aim has been met through accreditation visits to all ECT services in Scotland. These visits involve a multidisciplinary accreditation team inspecting each unit against recognised, valid standards developed from guidelines produced by the relevant national professional bodies. Each visiting team is comprised of SEAN Clinical Coordinator, a Consultant Psychiatrist with responsibility for an ECT service, an ECT Nurse and a Consultant Anaesthetist.

The national Steering Group reviews these standards regularly using evidence based guidelines and standards from other professional bodies. In doing so SEAN works alongside the Service Users and Carers Reference Group encouraging feedback to ensure that views of patients and relatives are included. In addition to these formal visits, a series of more informal, unannounced visits will be ongoing to ensure that the quality of service is continued as part of routine day-to-day clinical practice and to verify that any changes recommended at the initial accreditation visit have taken place.

In working towards an improved national service, SEAN is actively involved in promoting and developing educational opportunities to maintain and enhance continuing professional development opportunities for all clinical staff involved with ECT. In 2007 the CONECTS sub-group (Committee of Nurses at ECT in Scotland) was formed through SEAN with the aim of enhancing the quality of care that was given to patients receiving ECT through improved, structured education and informal sharing of good ideas and practice. Initially this group was unfunded, however since joining ISD in 2008 some funding has been secured and the group has been expanded to include all nurses involved in the delivery of ECT (i.e. ECT nurses, Anaesthetic Nurses and Recovery Nurses) with three meetings of the group taking place each year.

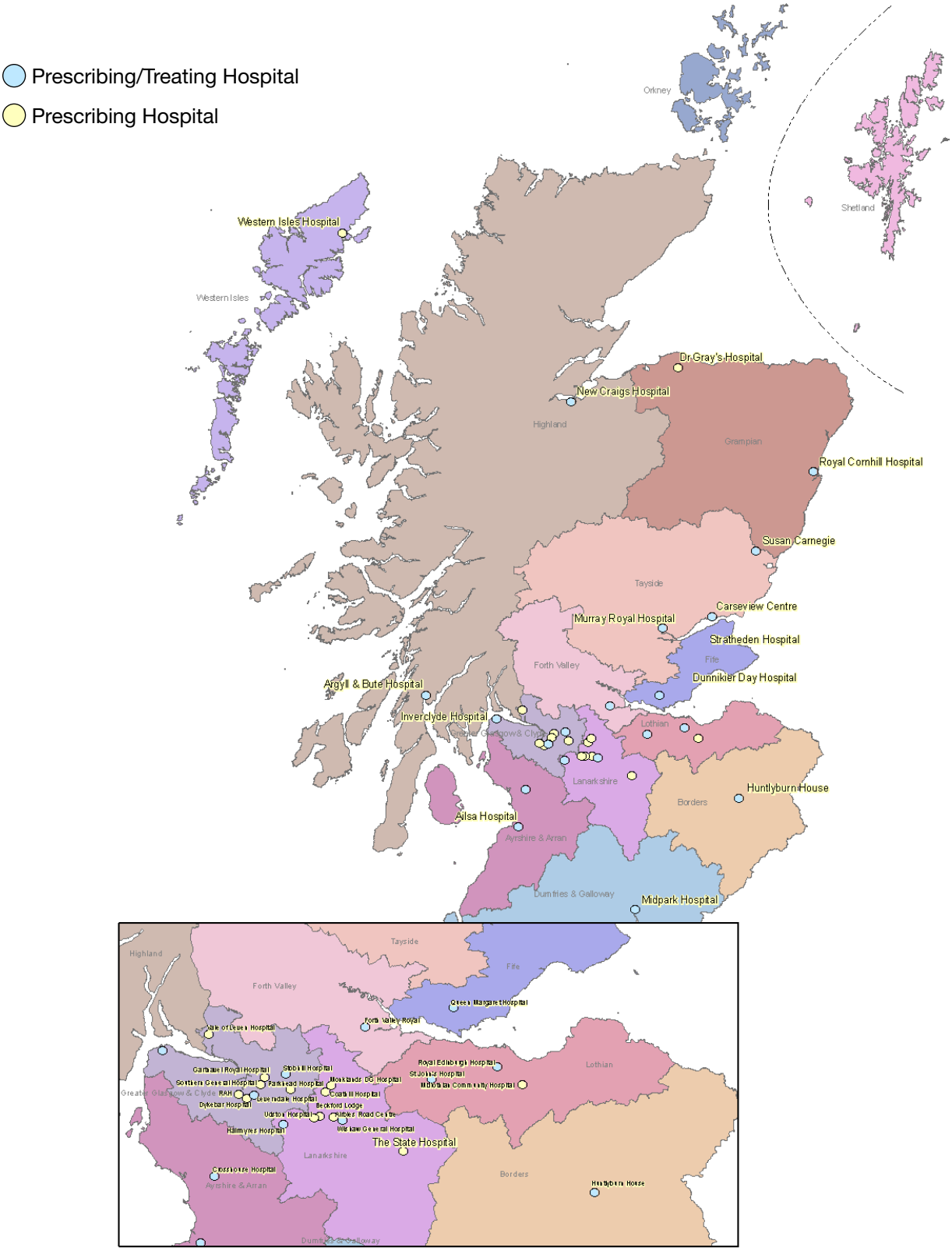
Following feedback from the Service Users and Carers Reference Group the CONECTS group successfully developed and launched a 'LearnPro' e-Learning module for all ward-based and escort nurses across Scotland. The aim of this module is to increase the knowledge and understanding of ECT for all mental health nurses in general and thus improve the quality of care delivered. Since its launch in June last year 5,044 individuals have accessed the module and 1,512 have successfully completed it and passed. Considering this is a non-mandatory module the uptake is impressive, however there is always room for improvement and completion of the module will become a level 2 criterion within the new SEAN Standards. NHS Forth Valley is to be highly commended due to the fact that they have made the module mandatory for any nurse escorting a patient to ECT and it is hoped that other NHS Boards follow this good example.

Building on the success of CONECTS, a Medics' sub-group was set up at the end of 2012 with representation from psychiatrists, anaesthetists and psychologists. This group looks at clinical practice, as evidenced through SEAN data, with a view to improving treatment of patients as they proceed through the ECT service.

Last year saw the launch of a SEAN Prescribers' Training Day, an event developed following feedback from psychiatrists that there was a need for more in-depth training in ECT for higher trainees and new consultants who may consider prescribing ECT. The inaugural event was held in September 2015 and was a great success. The overall feedback was excellent and we plan to run this as an annual training event.

Further details of the membership of these groups can be found in Appendix A.

Location of ECT Clinics in Scotland[1]



Note:
1. Detailed list of hospitals in Appendix B.

Introduction

This report summarises data that have been collected via an electronic care pathway installed in all ECT treatment clinics in Scotland. Data are collected on every aspect of patient care relating to ECT that are reflected in, and can be measured against SEAN standards[5].

The data within this report are presented in sections relating to patient characteristics, consent and legal status, diagnosis, details of the actual treatment administered and clinical outcomes. In addition to this information, there is also a summary table available at the beginning of the report to enable comparison of clinic activities in 2015.

A Report Writing Group was formed with representation from each discipline involved with the delivery of ECT. As a result the report meaningfully reflects clinical issues relevant to the practice of ECT by having input from professionals of all disciplines required for the provision of a high quality clinical service. This provides clinical staff with more precise information on certain aspects of care and treatment relevant to their day to day practice and thereby enables them to evaluate their current practice and improve the quality of patient care.

The current SEAN standards follow the publication of the Royal College of Psychiatrists ECT Handbook (3rd Edition)[6]; the Royal College of Anaesthetists Guidelines for the provision of Anaesthetic Services[7] and the Association of Anaesthetists of Great Britain & Ireland Safety Guidelines on Immediate Post-anaesthesia Recovery 2013[8]. For 2015, we devised a new, more rigorous, accreditation process involving both announced and unannounced visits (described in Section 7).

Data are presented in tables and charts with accompanying text to alert the reader to points of interest and compliance with available national standards where appropriate. The emphasis within this report is on providing a descriptive account of ECT activity while protecting the interests and confidentiality of patients undergoing treatment. To this end, we are duty bound to introduce a degree of suppression within the report tables and charts in accordance with ISD's Disclosure Control Protocol[9]. We are continuing to work to improve our data collection by working closely with ECT clinics.

Summary and Key Findings

Nineteen centres throughout the whole of Scotland were responsible for the safe delivery of ECT as an effective therapeutic treatment in 2015.

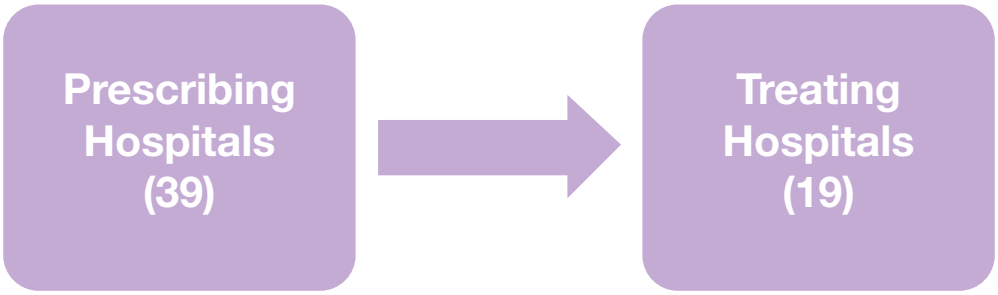
- All ECT Clinics in Scotland achieved “Accreditation”, 89% achieved “Accreditation with Excellence”.
- A total of 367 patients received ECT through 448 treatment episodes with a median number of 9 treatments per episode.
- In total, 11% of episodes of ECT were administered as an emergency life saving treatment.
- 23% of all patients receiving ECT had expressed a specific preference for the treatment.
- 43% of patients receiving ECT had previously responded well to treatment.
- The majority of patients who received ECT were suffering from symptoms of depression either in the context of depressive or bipolar disorders and the most prevalent single ICD-10 diagnosis was Depression without Psychosis (36%).
- The most common indication remains treatment resistance to anti-depressant medication (53.3%).
- The majority of treatments (62%) involved patients deemed to have capacity and thus capable of giving informed consent.
- 70% of patients who completed an episode of ECT showed significant improvement as evidenced by a 50% or greater reduction in MADRS score over the course of treatment.
- 63% of patients with capacity displayed an improvement following treatment, compared with 82% of patients without capacity, possibly reflecting the more severe nature of the illness in the latter group of patients at the very outset.
- ECT was delivered to adults of all age groups, with more females than males receiving treatment (62% vs. 38%). This reflects the relative higher prevalence of depressive illness in women compared with men.
- The percentage of patients from ethnic minorities receiving ECT remains lower (1%) than the percentage in the general population (4%).
- The majority of patients (69%) received just one episode of treatment since SEAN audit began in 2005 whilst a small proportion (4%) received 5 or more episodes of treatment since 2005. This would appear to be suggestive of the relapsing nature of depressive illness in these particular patients.
- 96% of treatments involved bilateral ECT, including a small proportion (2%) changing from unilateral to bilateral during the course of the treatment.
- As in previous years, the most frequently recorded single side effect remains headache (32%).
- There were a total of 9 critical incidents reported (0.2% of all treatments).

Methods

The Scottish ECT Accreditation Network Annual Report uses records submitted to Information Services Division (ISD) from hospitals providing ECT treatment in Scotland. The database of records is administered by ISD analysts from the Scottish Healthcare Audits service area.

It is the intention of SEAN to record details of all ECT administered in Scotland. All Scottish ECT clinics participate in the audit and the number of ECT episodes reported by each hospital during 2015 was verified with clinical leads as part of a regular validation process. Some minor differences may remain, however, when compared to local reporting sources. The annual report is based on data received by a specific date and any local data changes made after this date will not, therefore, be reflected in the annual report.

Some hospitals do not deliver ECT as a treatment on site but may prescribe ECT and refer patients to another hospital for treatment. There are 39 prescribing and 19 treating hospitals represented in this report.



Lists of these hospitals, their locations and descriptions of any relevant data issues are provided in Appendix B and shown on the map preceding the introduction. Data presented throughout this report relate to treating hospitals rather than prescribing hospitals.

Analyses are mainly presented at the level of an ECT episode, an episode being a series of treatments. Sections 1-3 report on patients and episodes while Section 4 focuses on numbers of treatments (i.e. scheduled visits to the ECT suite) and stimulations (i.e. instance of administering electric current). The inclusion of a patient, treatment or stimulation within a particular time period is determined by the date that the episode of ECT commenced. Figure 0.1 demonstrates how this data terminology is applied to ECT treatment and to the report itself.

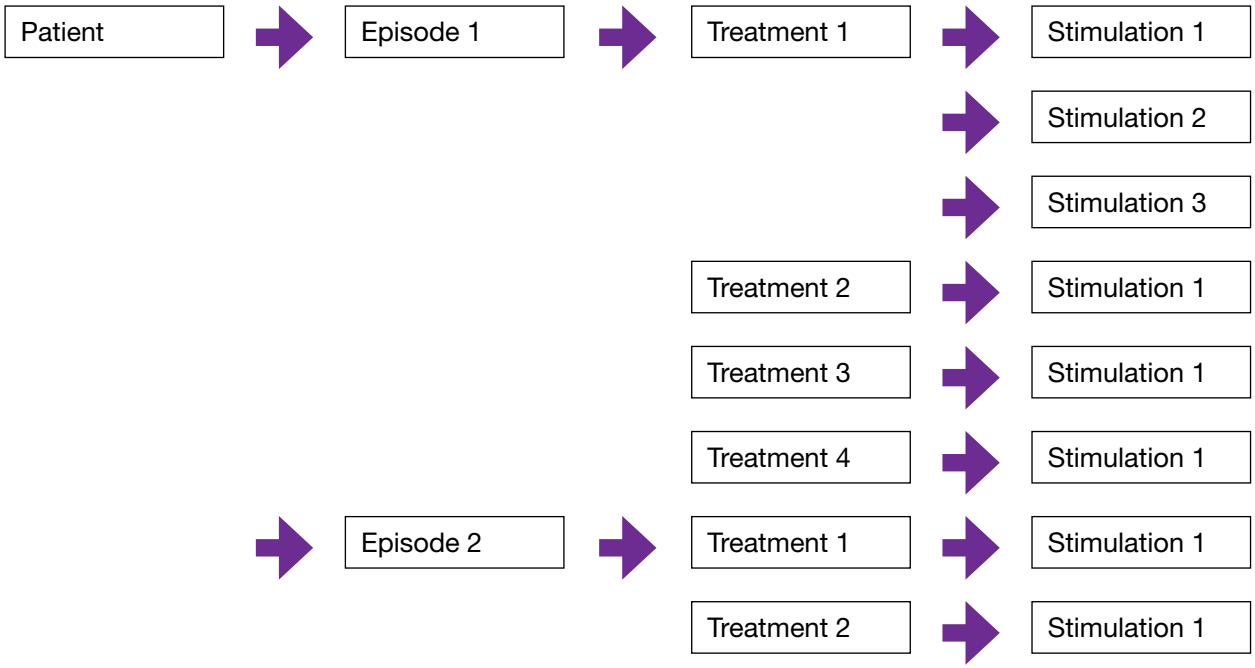
In 2015, one patient, five episodes, 58 treatments and 65 stimulations were excluded from the report as duplicate or incomplete records. Following validation, the number of ECT episodes included in this report for 2015 is 448.

Section 5 reports on outcomes of ECT where an episode is complete (i.e. treatment ended because the episode was completed as planned or discontinued early). When data for this report were finalised (July 2016), 277 (62%) episodes of ECT started in 2015 were identified as complete and are reported in Section 5 (the remaining 171 (38%) episodes were not identified as completed). As well as incomplete records because of ongoing treatment, records may also be incomplete because of data entry issues (data not available or not entered). When reporting on records that are not fully complete, this will be indicated in accompanying commentary or notes.

To prevent identification of patients in centres where very few patients are treated, some numbers have been suppressed within report tables and charts in accordance with ISD's Disclosure Control Protocol[9]. Where small numbers can be calculated from remaining numbers, further values are also suppressed. In charts, small numbers of patients or episodes are suppressed and the values underlying the accompanying bars are replaced with dummy values.

Population figures are based on National Records of Scotland (NRS) (formerly General Register Office for Scotland) mid-year estimates[10]

Figure 0.1: SEAN data structure



Section 1 Demographics

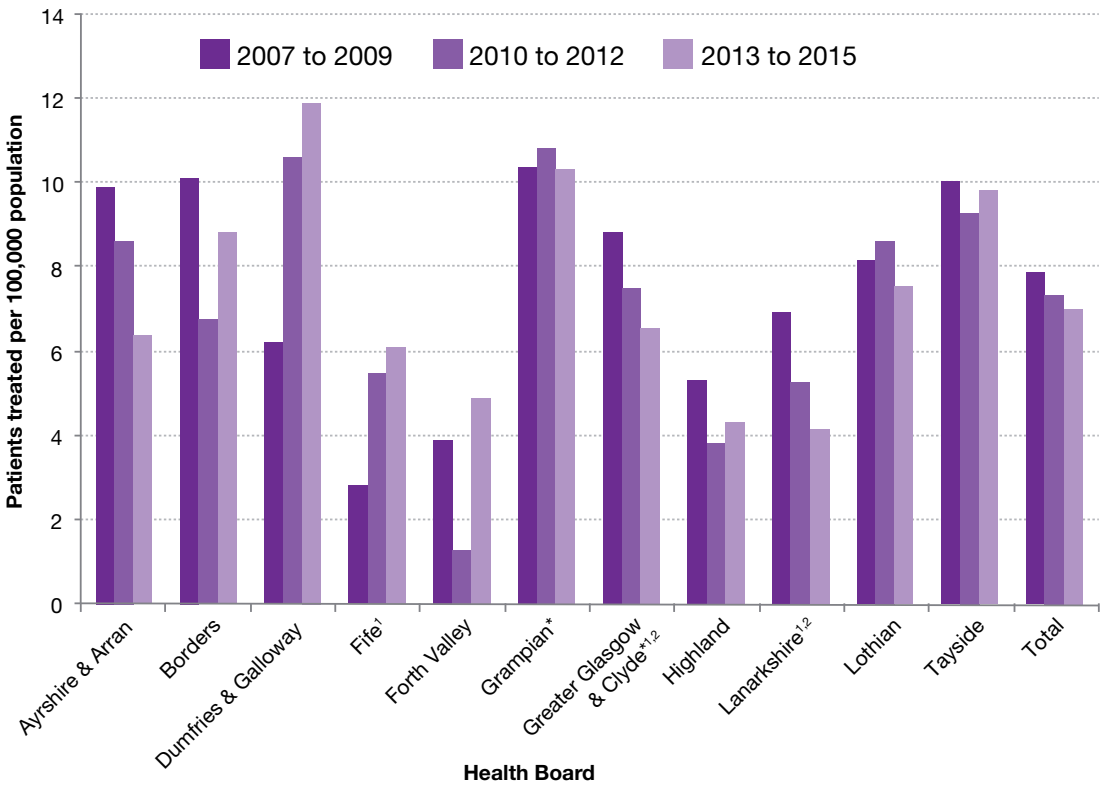
A hospital by hospital summary table of ECT activity in Scotland is presented inside the front cover of this report. The relative year-on-year use of ECT, by Health Board throughout Scotland, is illustrated in Table 1.1.

Patients

ECT remains a treatment used mostly for people in their middle and late life (Fig 1.2). Less than 10% of those receiving ECT were aged under 40 years, while this group accounts for just over 48% of the population of Scotland[11]. Relative use of ECT increases with age: 46% of people receiving ECT were in their 50's or 60's, while they account for almost 25% of the population, and just over 10% of people receiving ECT were aged over 80 years, while this age group accounts for only 4% of the population.

The percentage of patients from an ethnic minority receiving ECT in Scotland remains lower than the percentage in the general population. Much of this difference can be explained by their demographic spread: over 75% are aged under 40 years[11].

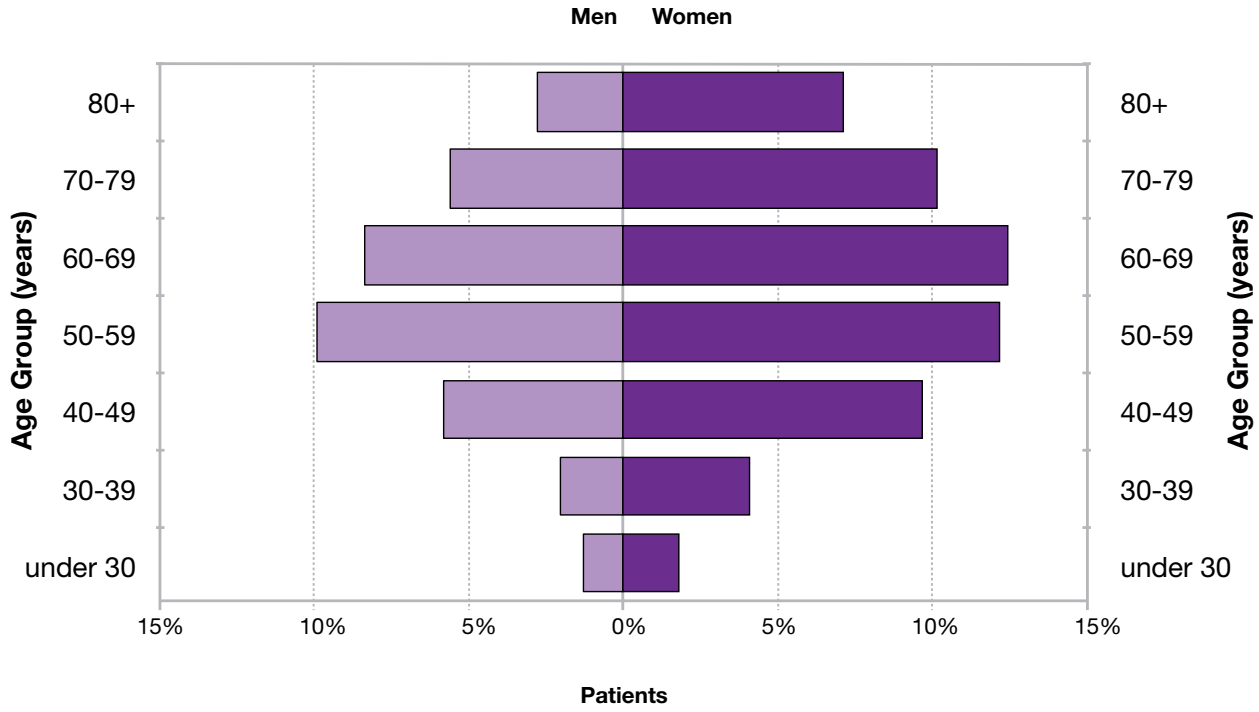
Figure 1.1: Number of patients treated by Health Board, per 100,000 population (2007 - 2009, 2010 - 2012 & 2013 - 2015)[1]



Notes:

1. Data for Dumfries & Galloway, Fife and Lanarkshire are incomplete for 2009 because of data collection problems. See Appendix B.
2. NHS health boards were re-configured from 1st April 2014. The chart uses the 2014 re-configuration throughout. The issue mainly affects Greater Glasgow & Clyde and Lanarkshire. The change in 2014 resulted in an approximate 7% drop in the population estimate for Greater Glasgow & Clyde and an approximate 14% rise in the population estimate for Lanarkshire.

Figure 1.2: Number and % of total patients treated, by age group and gender (2015)



Episodes

The use of ECT in Scotland has remained at a fairly steady level over the past 10 years, with over 400 treatment episodes per year being recorded throughout that time (Figure 1.3).

Activity levels differ between the clinics across Scotland with some clinics in urban centres recording 70 or more treatment episodes per year while other clinics, often in more remote settings, recording treatment episodes in single figures (Table 1.1).

Figure 1.3: Number of episodes, by year (2006-2015)

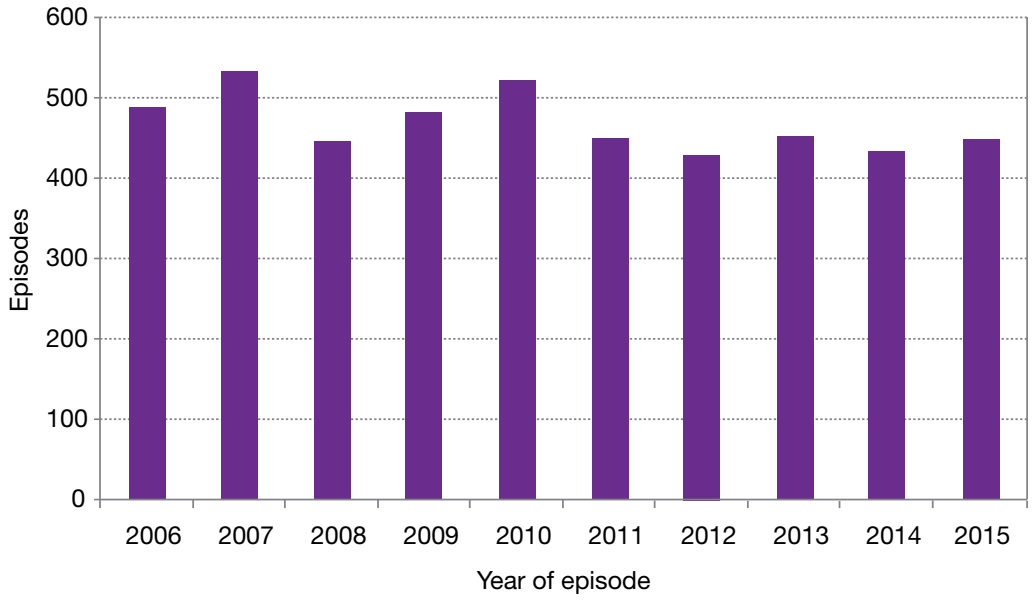


Table 1.1: Number of total episodes and treatments, by hospital (2011-2015)

Hospital	Episodes					Treatments[1]				
	2011	2012	2013	2014[r]	2015	2011	2012	2013	2014[r]	2015
Ailsa & Crosshouse	48	40	34	30	25	445	285	283	271	203
Argyll & Bute	*	17	10	*	20	27	114	73	41	162
Carseview	20	18	18	16	14	201	193	193	138	118
Dr Gray's	0	0	0	0	0	0	0	0	0	0
Dunnikier	*	0	0	0	0	68	0	0	0	0
Forth Valley Royal	*	*	18	15	14	47	33	202	176	120
Hairmyres	15	14	18	18	12	111	99	158	151	101
Huntlyburn House	12	*	*	16	12	164	62	54	128	107
Inverclyde	13	14	19	14	15	118	116	281	171	149
Leverndale	32	38	29	29	30	316	346	316	317	315
Midpark Hospital	20	23	25	27	22	151	199	235	190	173
Murray Royal	14	14	24	26	25	107	116	226	242	272
New Craigs	*	*	*	*	*	79	37	25	51	71
Queen Margaret	17	27	24	25	36	234	327	243	291	333
Royal Alexandra	0	0	0	0	0	0	0	0	0	0
Royal Cornhill	77	72	87	75	66	600	598	707	580	596
Royal Edinburgh	64	50	51	47	45	1,037	444	508	634	483
St John's	24	23	24	31	27	197	156	191	245	257
Stobhill	41	34	40	43	47	301	292	345	339	413
Susan Carnegie	*	*	*	*	13	62	90	96	69	129
Wishaw	19	22	15	*	17	151	150	144	59	164
Total	**451**	**429**	**454**	**441**	**448**	**4,416**	**3,657**	**4,280**	**4,093**	**4,166**

Notes:
Epi = Episodes
Treat = Treatments
* Indicates values that have been suppressed because of the potential risk of disclosure.

1. The number of treatments may vary annually depending on each hospital's use of continuation/maintenance ECT.
r Revised since previous publication in 2015 as a result of more up-to-date data.

As in previous years, most individuals receive treatment twice per week, while it appears that the numbers of those having treatment at intervals other than once or twice per week is increasing (Table 1.2). This may be explained by an increase in the use of continuation/ maintenance ECT (see below).

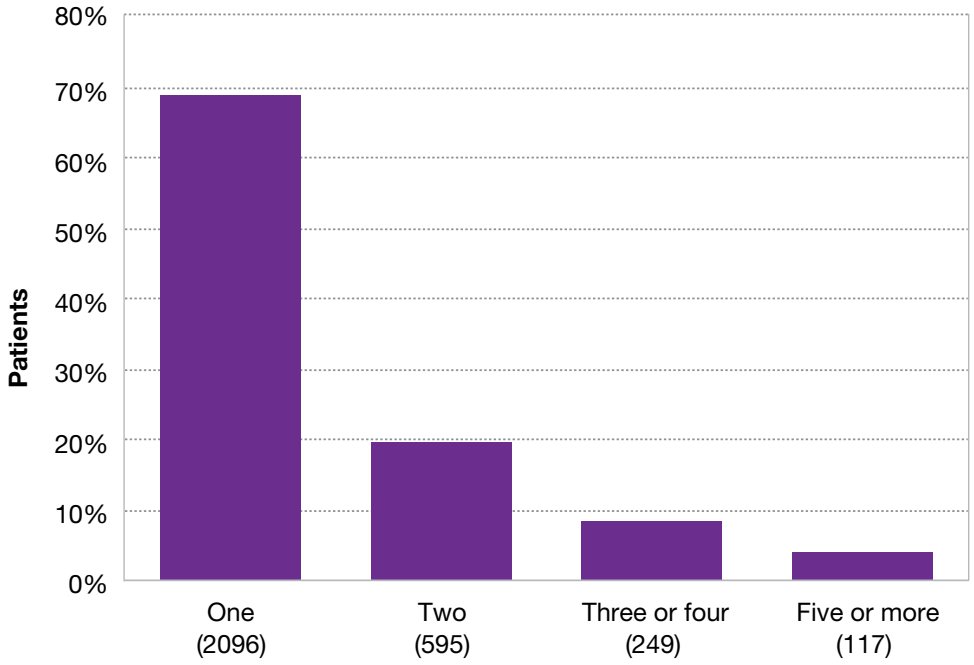
Table 1.2: Number and % of total episodes, by episode treatment frequency (2015)[1]

Treatment frequency	Number of Episodes	% Episodes
Weekly	9	3.3
Twice weekly	253	92.7
Other	11	4.0
Total	**273**	**100**

Note:
1. Treatment frequency information was missing for 4 out of 277 completed episodes (1.4%).

With data collection going back over the past 11 years, we know that 3,057 individuals have received ECT in Scotland in that time (Figure 1.4). We can identify individuals who have previously received ECT and know that 2,096 (68.6%) individuals have had only one treatment episode in the past decade. Of those 961 who have had more than one treatment episode, 595 had 2 episodes, 249 had 3 or 4 episodes and 117 individuals have had 5 or more treatment episodes.

Figure 1.4: Number and % of total patients who had multiple treatment episodes between (2005-2015)[1]

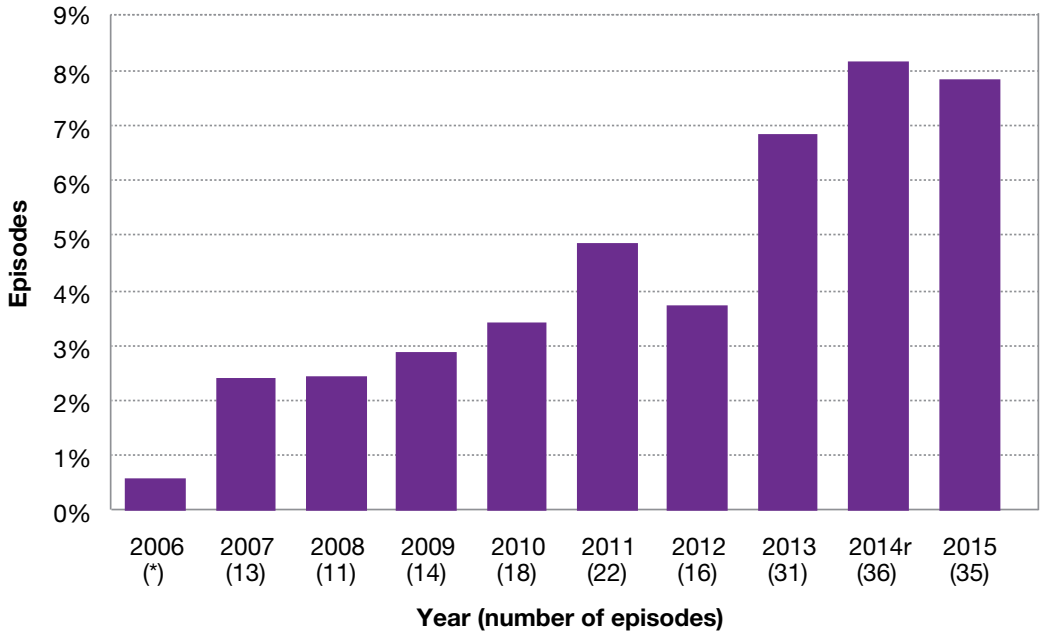


Note:
1 This figure will underestimate the true number of ECT episodes for some patients because the database was not operational before 2005.

Continuation/ maintenance ECT can describe cases where ECT continues beyond the usual acute course of treatment, lasting several weeks, into a longer period of several months. It is a treatment option considered when an individual's clinical recovery cannot be maintained by medication or other therapies and usually involves an increase in the time interval between

treatments i.e. to fortnightly or longer. Our data appear to show some increase in the use of continuation/ maintenance ECT in recent years (Figure 1.5) with it accounting for 35 (7.8%) treatment episodes in 2015.

Figure 1.5: Number and % of continuation/ maintenance episodes, by year (2006-2015)[1]



Notes:

* Indicates values that have been suppressed because of the risk of disclosure. Dummy values have been inserted in bar chart categories where information is suppressed.

r Revised since previous publication in 2015 as a result of more up-to-date data.

1. Continuation/maintenance episodes are not recorded consistently throughout Scotland. Continuation/ maintenance episodes have therefore been determined methodically based on the number and frequency of treatments in an episode.

Section 2 Consent and Legal Status

All patients who receive ECT must either give informed consent or be protected by the legal safeguards in legislation. Relevant legislation is encompassed within:

- The Mental Health (Care and Treatment) (Scotland) Act 2003 (the 2003 Act)
- The Adults with Incapacity (Scotland) Act 2000 (the 2000 Act)

Consent must be in writing and be based on an understanding of the treatment, the reasons why it is being offered and possible risks and side effects. If the patient is not capable of providing informed consent, treatment must be authorised by an independent psychiatric opinion. In urgent situations, the legislation allows for ECT to be administered before an independent opinion can be obtained. Patients who are capable of providing informed consent but who refuse the treatment cannot be given ECT. The electronic care pathway was designed to ensure that ECT can only be given if the correct legal and consent documentation is provided. The relevant legal and consent options are shown in Table 2.1.

Table 2.1: Legal status and consent for ECT

Capacity to consent	Legal status	Treatment authorisation
Capable	Informal	Written consent
	Detained	Written consent with capacity certified on form **T2**.
Incapable	Informal	Second opinion under section 48 of the 2000 Act (‘**s48**’). This is not used if the patient resists or objects.
	Detained – not resisting or objecting	Independent ‘best interests’ opinion under the 2003 Act recorded on form T3 (referred to as ‘**T3A**’).
	Detained – resisting or objecting	As above but with indications limited to situations of necessity (referred to as ‘**T3B**’).
	Urgent (including patients detained under emergency certificates)	Treatment given in advance of an independent opinion under either the 2003 or 2000 Act (common-law principle of necessity). Signed case note entry from prescribing practitioner that ECT is required as an emergency, preferably with informal local second opinion. **T4** form (record of treatment) subsequently sent to MWC.

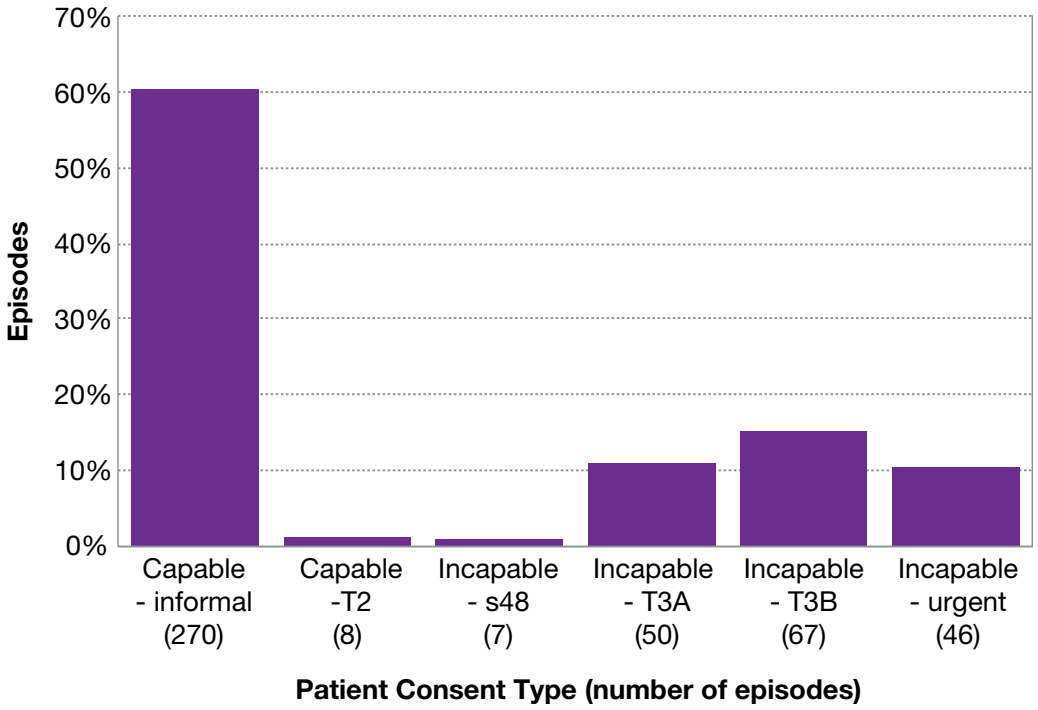
The Mental Welfare Commission for Scotland (MWC) arranges all independent opinions and is informed of treatment given under urgent situations. For more information, see www.mwcscot.org.uk

Figure 2.1 shows consent and legal status at the beginning of treatment. Informal (voluntary) patients who give informed consent are the largest group of people receiving ECT. A small percentage of patients detained under the 2003 Act were also considered to have retained the capacity to consent to ECT. In total, 62% of all episodes of treatment with ECT had the patient’s informed consent. This is a slight fall since last year.

Of the 170 episodes of ECT where the patient could not consent, 46 (27%) began with urgent treatment given to save life, prevent serious deterioration or alleviate serious suffering. This reflects that many people who lack capacity to consent to ECT are seriously unwell.

In relation to all patients treated under the 2003 Act with the authority of a T3 form, 57% of these episodes (67 out of 117) involved patients who lacked capacity and were also resisting or refusing.

Figure 2.1: Number and % of total episodes, by patient consent at episode entry (2015)



The gender and age of patients with and without capacity at the start of an episode of ECT is documented in Table 2.2.

For those patients either with capacity or without capacity, females were more likely to lack capacity at the start of treatment.

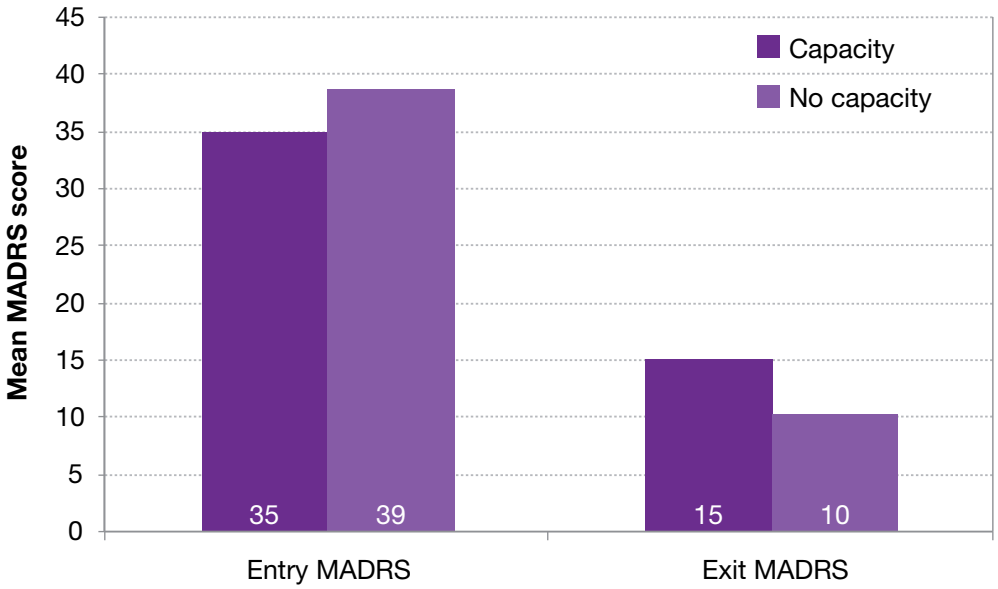
Older patients are more likely to lack capacity to consent to ECT. This may be due to the greater effect of severe depression on cognitive functions such as memory and reasoning ability for older people.

Table 2.2: Percentage of episodes by patient gender and capacity, and age by capacity (2015)

		Capacity	No capacity
Gender	Male (%)	71.5%	28.5%
	Female (%)	56.5%	43.5%
	Both Sexes (%)	62.1%	37.9%
Age	Mean (SD)	57.9 (13.8)	63.6 (16.3)
	Median	57	67

We have shown data on benefit as measured by the MADRS[2] performed before and at the end of a course of ECT (Figure 2.2). This figure indicates that patients who lack capacity to consent are more severely depressed and have a greater overall improvement in the MADRS following ECT. This demonstrates the importance of making ECT available to patients who are too unwell to be able to give fully informed consent.

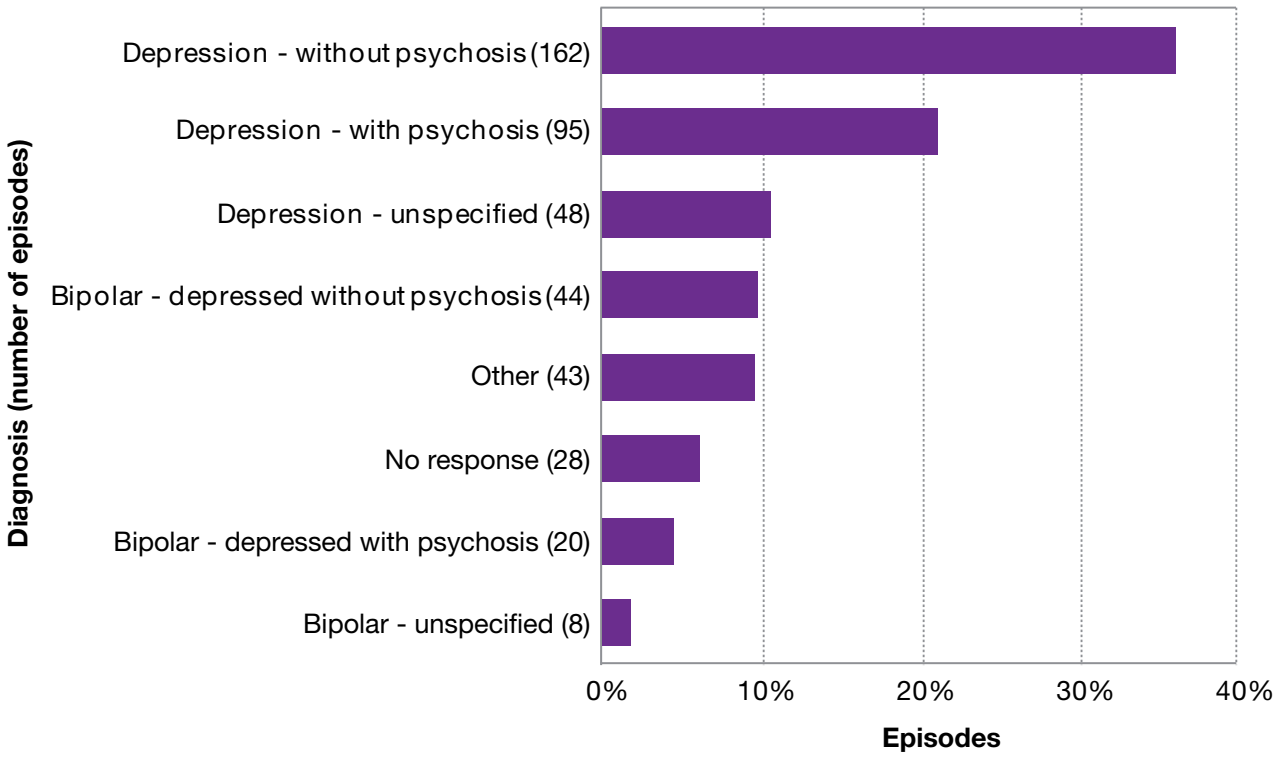
Figure 2.2: Mean MADRS score before and after treatment, by patient capacity (2015)



Section 3 Diagnosis and Indications for Treatment

Figure 3.1 shows the primary diagnosis for each episode in 2015 based on 4-character ICD 10 codes[12]. The majority of patients who received ECT were suffering from symptoms of depression, either in the context of a depressive or bipolar disorder. The two most common diagnoses were depressive episode without psychosis (36.2%) and depressive episode with psychosis (21.2%). Patients for whom psychosis status was specified were twice as likely to lack capacity when psychotic symptoms were present. Psychotic symptoms are often taken as a proxy for severity and can lead to significantly impaired decision making abilities.

Figure 3.1: Number and % of total episodes, by primary diagnosis (2015)



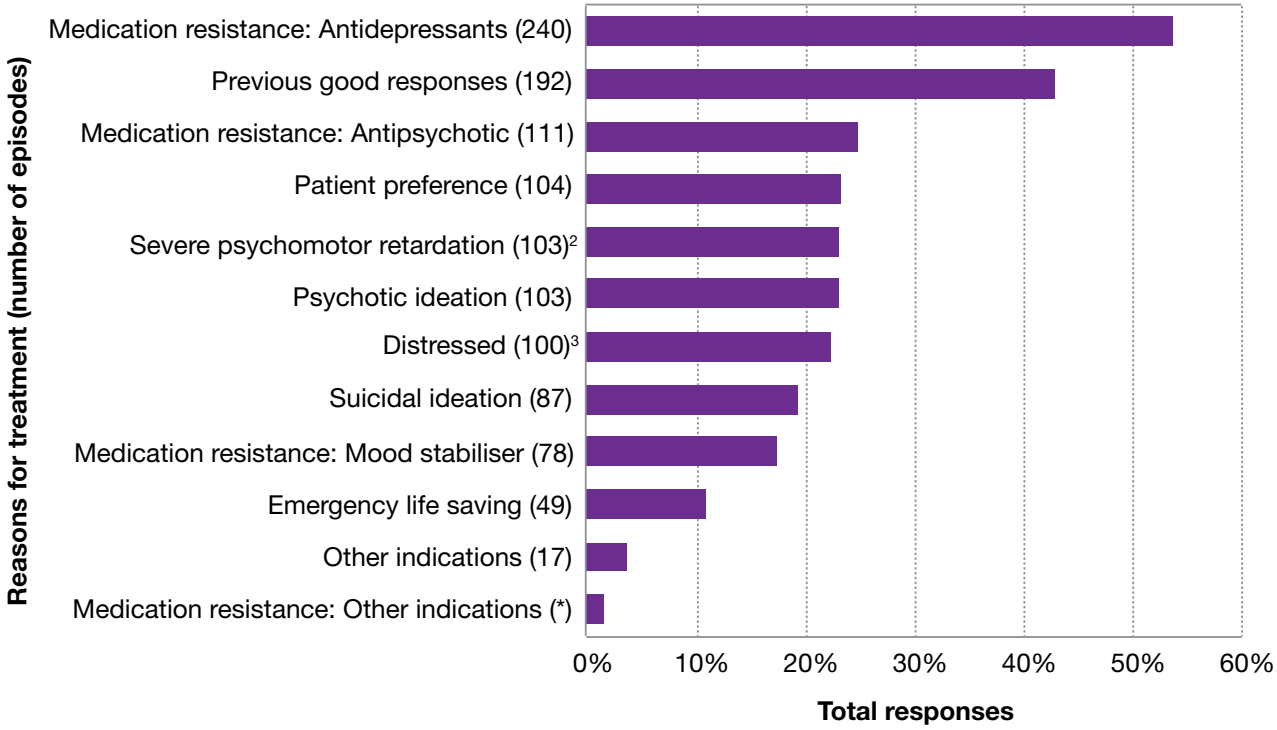
Notes:

1. The most common diagnoses in the 'Other' category were: Schizophrenia & Schizoaffective disorders and these diagnoses accounted for just over three quarters of this group. Additional diagnoses included: Dysthymia; Obsessive-compulsive disorder; Dissociative [conversion] disorders; Emotionally unstable personality disorder; Hypochondriacal disorder, Mental and behavioural disorders associated with the puerperium, not elsewhere classified; Organic mood disorders; Post-schizophrenic depression. Cases where the patient had a primary diagnosis which would not routinely be treated with ECT were validated with clinical teams using current guidelines from RCPsych and NICE and found to have appropriate indications for treatment.

ECT guidelines and depression guidelines produced by the National Institute of Health & Clinical Excellence (NICE)[13,14] advise that ECT should be used when the illness is severe and life threatening, when a rapid response is required, or when other treatments have failed. The SEAN audit asks clinicians to record as many reasons for treatment as apply to each treatment episode (Figure 3.2). In line with these recommendations, the main reason for prescribing ECT was for

antidepressant-resistant illness (53.3%). Similarly, illnesses resistant to antipsychotics (24.8%) or mood stabilizers (17.4%) were also widely reported. Severity of illness was also a deciding factor in many cases, illustrated by the reason for treatment being frequently recorded as 'severe psychomotor retardation' (23.0%), 'psychotic ideation' (23.0%), 'suicidal ideation' (19.4%) or 'too distressed to await response to medication' (22.3%). Use of ECT as an emergency life-saving procedure (e.g. when the patient's physical condition had deteriorated markedly because they refused food and fluids) was recorded in 10.9% of episodes. Other common reasons for choosing ECT included previous good response (42.9%) and patient preference (23.2%).

Figure 3.2: Number and % of total episodes, by reason(s) for treatment (2015)[1]



Notes:
1. Figures total more than 100% because of the multiple response nature of the variables examined.
2. Refers to the mental and physical slowing that can occur in severe depression.
3. 'Distressed' is an abbreviation of 'Too distressed to await response to medication'.

Section 4 Treatment Details

There continues to be little variation from year to year in the average number of treatments (Table 4.1) administered to patients during an episode of ECT. In 2015, the median number of treatments per episode was nine.

Table 4.1: Mean and median treatments per episode and total treatments (2006-2015)

Year	Treatments per episode		Total Treatments
	Mean	Median	
2006	7.9	8	3,860
2007	7.7	7	4,089
2008	7.8	8	3,497
2009	9.0	8	4,378
2010	8.5	8	4,441
2011	9.8	8	4,416
2012	8.5	8	3,657
2013	9.4	8	4,280
2014	9.3	8	4,093
2015	9.3	9	4,166
2006-2015	**8.8**	**8**	**37,017**

SEAN audit data show the great majority of ECT treatments being delivered using a bilateral electrode placement. This was the case for 94% of patients, the figure rising to 96% when patients who had their treatment modality changed (e.g. starting with unilateral but switching to bilateral) were taken into account. Whilst bilateral ECT is recognised to be associated with greater short term cognitive (memory) difficulties than unilateral, patients receiving unilateral ECT usually require a greater number of treatment applications because the unilateral modality has a less potent treatment effect. In consultation with patients, the psychiatrists responsible for prescribing and administering ECT thus have to weigh the relative risks and benefits of both approaches in order to optimise patient treatment outcomes. Current practice in Scotland is consistent with RCPsych guidance[6].

ASA score

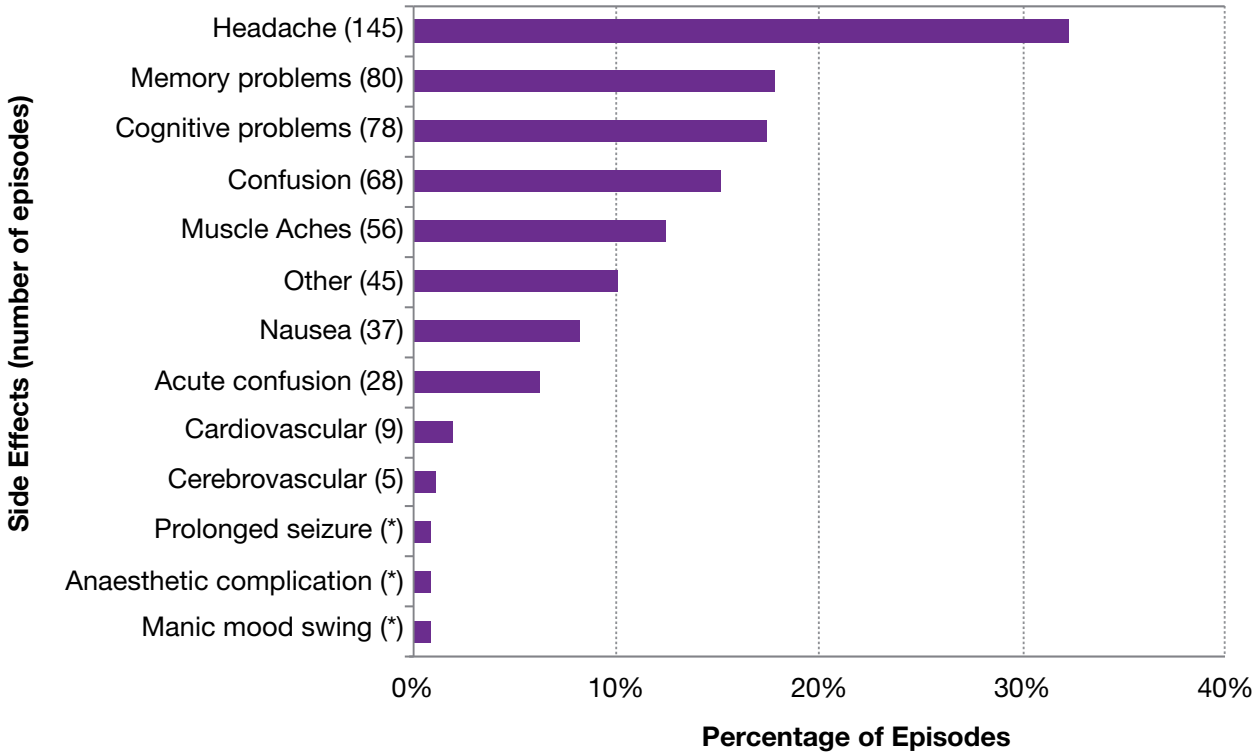
Before each episode of treatment the patient's general health is summarised according to the American Society of Anaesthesiologists' Classification of Physical Status ('ASA Score')[15]. In the early years ASA Score was recorded infrequently in the database, possibly because the ASA field was missing from the paper version of the care pathway. Recording has improved but is currently static; in 2015 85% of records included an ASA score (87% in 2014, 85% in 2013, 83% in 2012, 81% in 2011).

Provision of evidence that patients have been assessed prior to anaesthesia is an important step relating to the "**Safe**" ambition within the Healthcare Quality Strategy.

Side effects

As part of the Standards[5] recommended by SEAN, patients are reviewed clinically at least after every second treatment with specific enquiries as to the experience of adverse effects. Data were available for 96% of treatments and showed that in 55% of episodes, patients complained of side effects, a figure similar to previous years. The side effects are detailed in Figure 4.1 where it can be seen that the most common complaint was of headache (25%) with the second most common complaint being subjective memory difficulties, affecting 19% of episodes.

Figure 4.1: Prevalence of specific side effects experienced within episodes (2015)



Notes:

* Indicates values that have been suppressed because of the risk of disclosure. Dummy values have been inserted in bar chart categories where information is suppressed.

1. Figures total more than 100% because of the multiple response nature of the variables examined.
2. Cognitive side effects are recorded under four headings:
   Acute confusion – defined as treatment emergent delirium, where the patient experiences confusion for a short period of time immediately on wakening after treatment – recorded by ECT staff.
   Confusion – reported by the patients and occurring between treatments (e.g. on return to the ward).
   Memory problems – short lived autobiographical memory impairment (e.g. names, events) reported by the patient.
   Cognitive problems – problems with orientation, attention or concentration that were reported by the patients or noted by staff.

Anaesthetic induction agents

The relative percentage of patients receiving propofol, etomidate and thiopentone for induction of anaesthesia changed little from 2006 to 2010. 2011 saw an increase in the use of propofol and in 2015, 88% treatments took place after induction of anaesthesia with propofol. Each agent has advantages and disadvantages in the context of ECT. Each may have different effects on seizure threshold or seizure duration, thus consistency within an episode is probably more important than choice of individual agent.

Table 4.2: Use of anaesthetic induction agents for ECT, by year (2006-2015)

Year	Propofol		Thiopentone		Etomidate	
	n	%	n	%	n	%
2006	2,193	56.8	295	7.6	1,480	38.3
2007	2,561	62.6	343	8.4	1,416	34.6
2008	2,352	67.3	291	8.3	1,011	28.9
2009	2,623	59.9	412	9.4	1,603	36.6
2010	2,606	58.7	445	10.0	1,368	30.8
2011	3,409	77.2	180	4.1	586	13.3
2012	3,028	82.8	198	5.4	249	6.8
2013	3,523	82.3	251	5.9	364	8.5
2014	3,593	87.8	187	4.6	278	6.8
2015	3,674	88.2	178	4.3	274	6.6
2006-2015	**29,562**	**72.3**	**2,780**	**6.8**	**8,629**	**21.1**

Muscle relaxants

A recognised side effect of the muscle relaxant suxamethonium is muscle aches ('suxamethonium myalgia'). Prior administration of a small dose of non-depolarising muscle relaxant ('pre-curarisation') reduces the incidence. The overall incidence of suxamethonium myalgia reported to SEAN (4% in 2015) is lower than in many published studies[16], perhaps reflecting the predominantly older patients receiving ECT and the use of relatively small doses of suxamethonium. In previous years, for patients receiving ECT in Scotland the incidence of suxamethonium myalgia was less in those patients who had been pre-curarised although that was not observed in 2015.

Table 4.3: Number and % of treatments by patient experienced muscle aches and pre-curarisation (2015)[1]

Muscle Aches	Patient Pre-curarised				
	No		Yes		Total
	n	%	n	%	
No	1,770	96.1	93	93.9	1,863
Yes	71	3.9	6	6.1	77
Total	**1,841**	**100**	**99**	**100**	**1,940**

Notes:
1. This analysis excludes treatments where side effects were not assessed.

Critical incidents

A critical incident is an event that could have, or did, result in an adverse outcome. For example, harm to patient (e.g. deterioration in vital signs, prescribing errors), to staff or other people in the vicinity (e.g. assault). Staff are encouraged to report 'critical incidents' both on local systems (e.g. Datix) and in the SEAN database. The emphasis within SEAN is on establishing facts, with a view to preventing similar events, rather than apportioning blame. ECT teams are strongly advised to have a team meeting to discuss the incident, examine if it was preventable and identify actions required to minimise the risk of it occurring again.

In 2015 there were 10 critical incidents reported within the initial data submitted. Subsequent enquiries by members of the SEAN Steering Group determined that only 9 of these fitted the criteria for a critical incident. SEAN reviewed the outcomes of all critical incidents reported in 2015.

Table 4.4: Number and % of total treatments involving a critical incident (2015)

Critical Incident	Number of Treatments	% Treatments
No	4,157	99.8
Yes	9	0.2
Total	**4,166**	**100**

Section 5 Outcomes

This section describes the results of completed ECT treatment using predefined assessment tools. It also reports on ECT treatment episodes which discontinued (ended before completion). Episodes of treatment that were ongoing at the end of 2015 are not included.

274 out of 448 (61.2%) episodes were completed as planned or discontinued. Rating scales were completed for the majority of these: 87% completion for MADRS, 88% for CGI. This is a decline from 93% in 2014.

The Montgomery Asberg Depression Rating Scale (MADRS)[2] rates depression severity and detects change associated with treatment. While scores may range from 0 to 60, higher scores indicate more severe depression.

The median MADRS score before and after treatment in 2015 was 38 and 10 respectively. As in last year's report, individuals experiencing psychosis as part of their illness before treatment appeared to have a greater illness severity and also showed greater improvement with treatment (Figure 5.1).

Almost 70% of patients showed a 50% or greater reduction in the MADRS score. This is a reduction compared to 76% in 2014 but still a better outcome than is found with other treatment options for depression[17].

Figure 5.1: Median MADRS score before and after treatment, by diagnosis (2010-2015)

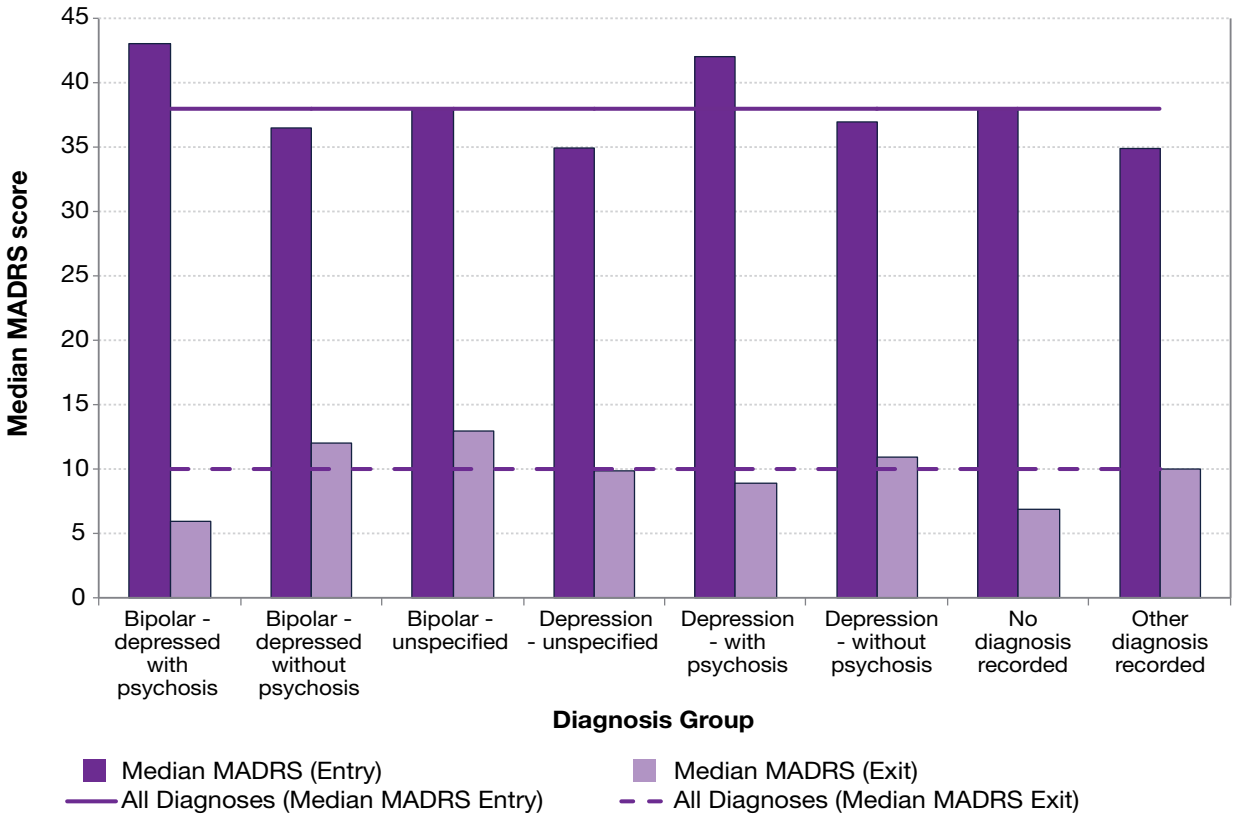
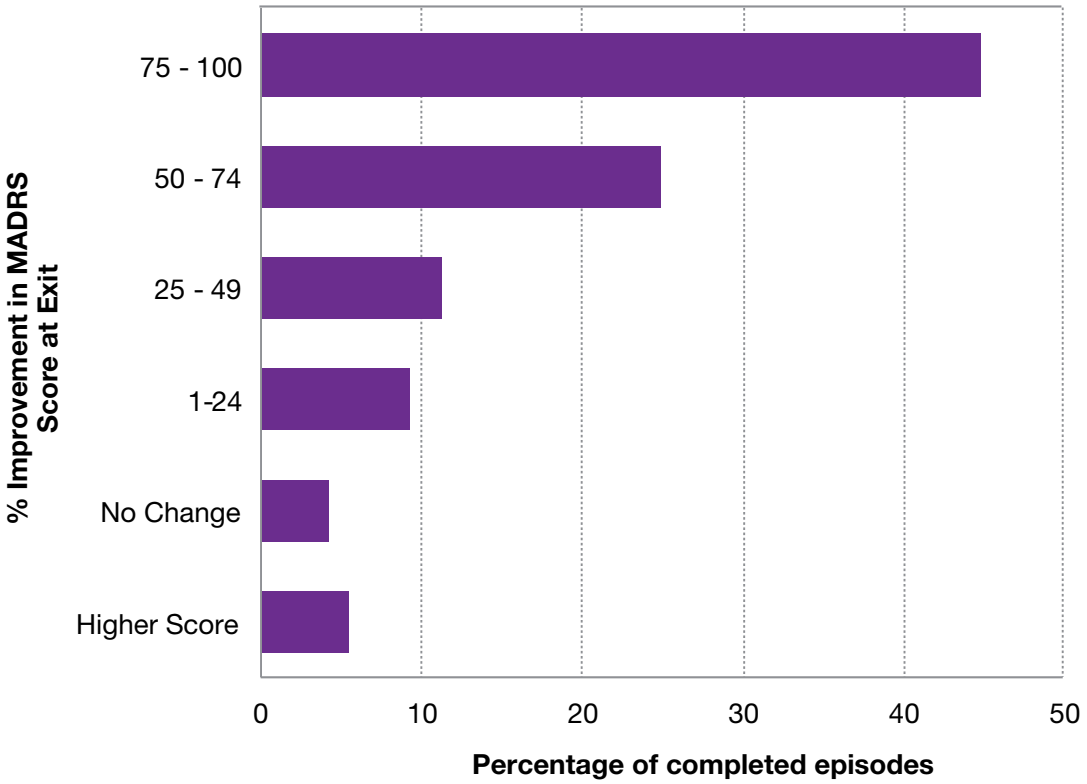


Figure 5.2: Percentage improvement in MADRS score (2015)



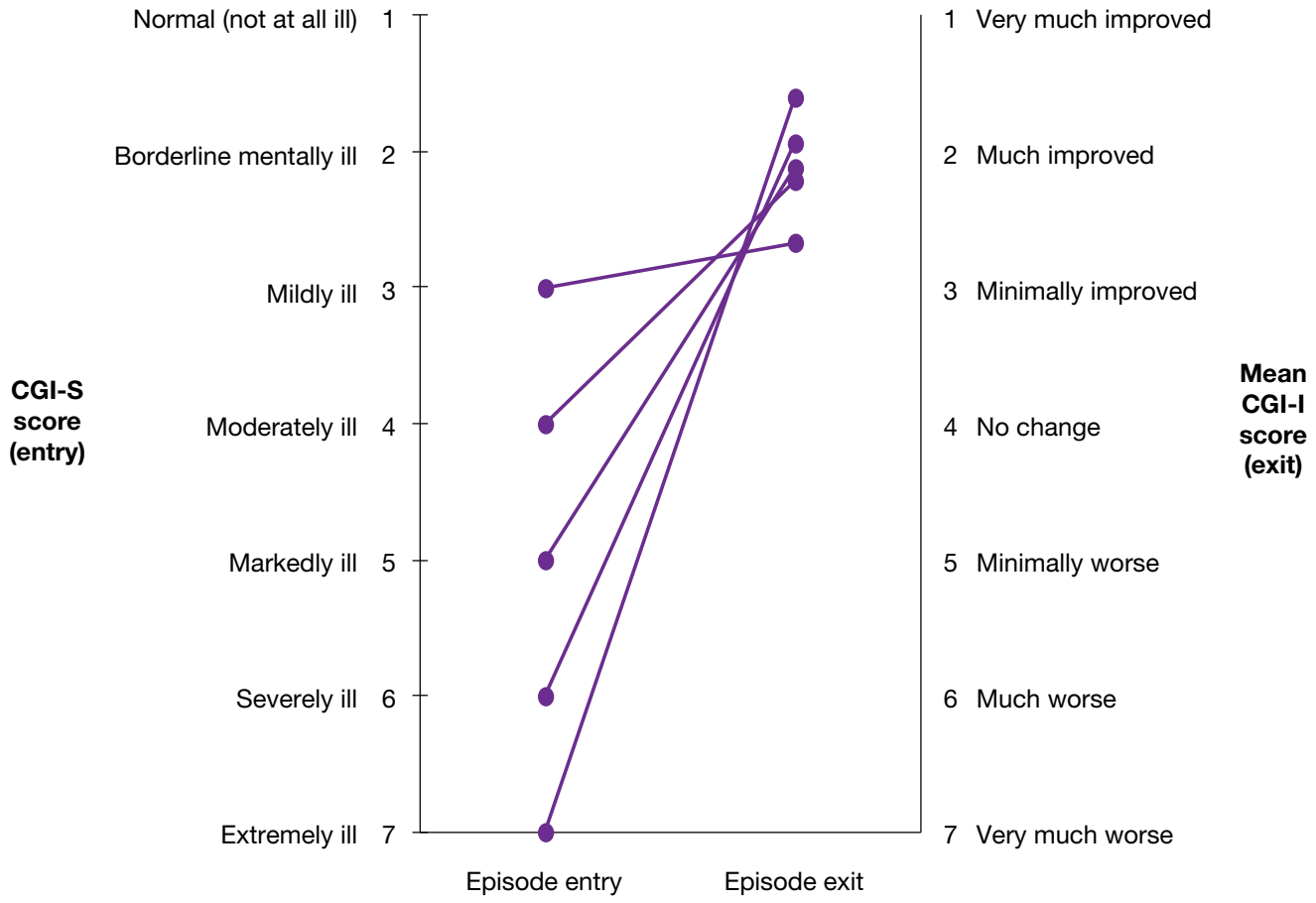
Clinical Global Impression (CGI)[3] rates severity of illness at entry and improvement on exit. It allows a clinician to rate a patient whatever their mental health problem. CGI has a 7 point rating for severity from "normal" = 1 to "among the most severely ill" = 7. The CGI improvement scale rates change on 7 points with "very much improved" at one extreme, "very much worse" at the other extreme and "no change" at the middle point.

In the period 2010-2015, 77% of episodes involved patients who were rated as "markedly, severely or extremely ill" on entry and 74% were rated as "much improved" or "very much improved" on exit. Figure 5.3(a) summarises the general trend for patients' CGI ratings to improve with treatment and for those who are most unwell to experience the greatest improvement.

Figure 5.3(b) gives greater detail regarding the proportions of patients in each CGI-I category on exit by their respective CGI category on entry. The larger proportions appear in the improvement categories and this is particularly among those patients who are categorised as markedly to severely ill at the start of their treatment.

A fifth of episodes, 60 of 274 episodes (21.9%), were not completed as planned. Figure 5.4 shows 10.2% of episodes were stopped due to medical considerations and 6.2% stopped due to the patient's decision to do so. This suggests that ECT remains a well-tolerated treatment.

Figure 5.3a: CGI score before treatment by mean CGI-I score after treatment (2015)



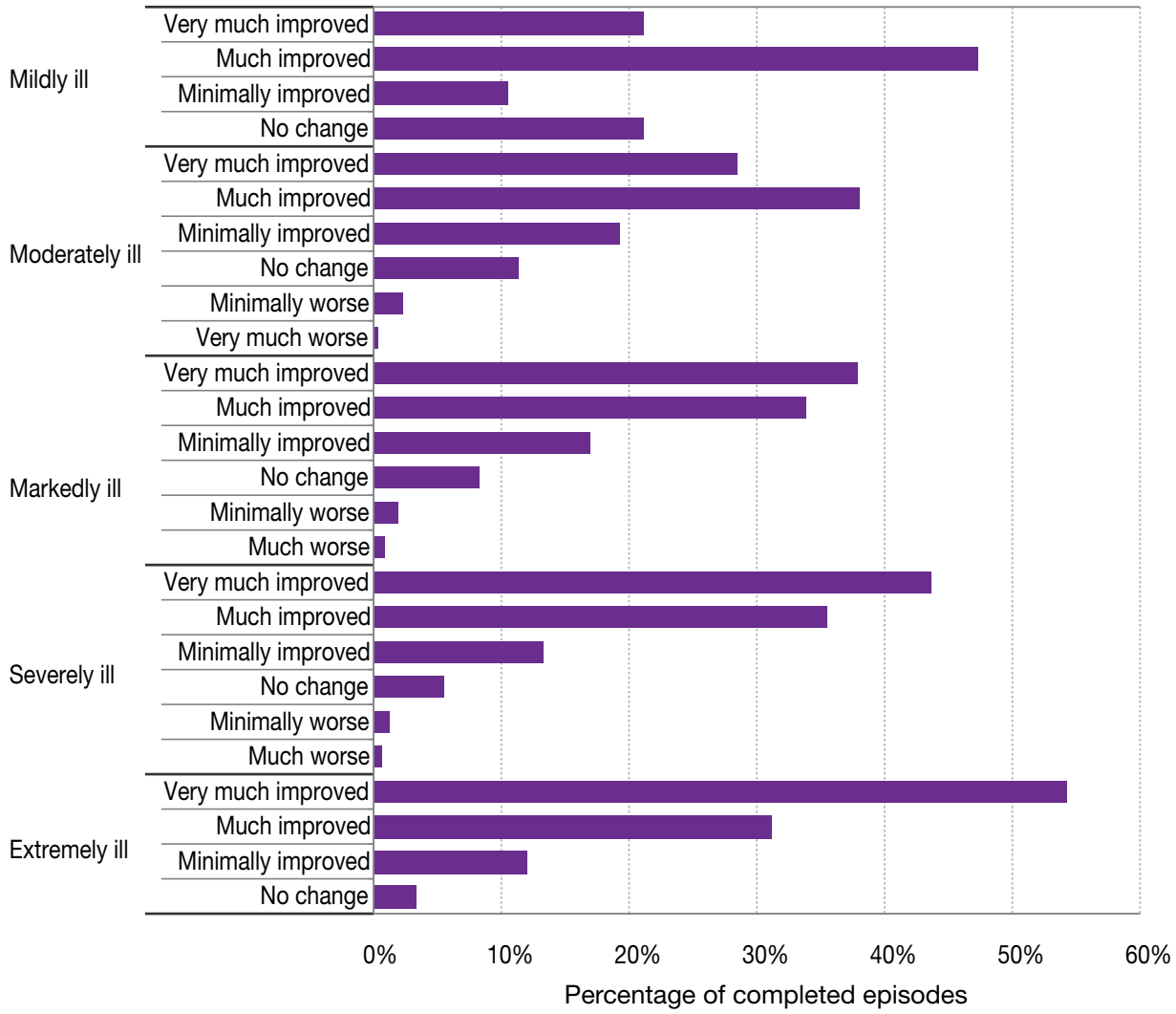
Notes:

1 Clinical Global Impression (CGI) rating scales are used to measure symptom severity and treatment response.
CGI-S means Clinical Global Impression - Severity. The CGI-S score on entry is an indication of how unwell patients are prior to their treatment.
CGI-I means Clinlcal Global Impression - Improvement. The CGI-I score is an indication of the degree of improvement or deterioration in a patient's illness after treatment.
CGI-S and CGI-I are measured on different scales and are based on subjective clinical judgement.

2 Episodes where the patient was receiving continuation treatment are excluded.

3 CGI score categories with fewer than five responses are excluded.

Figure 5.3b: CGI category before treatment by CGI-I category after treatment (2010-2015) for patients who are mildly ill to extremely ill



Notes:

1 Clinical Global Impression (CGI) rating scales are used to measure symptom severity and treatment response.
CGI-S means Clinical Global Impression - Severity. The CGI-S score on entry is an indication of how unwell patients are prior to their treatment.
CGI-I means Clinlcal Global Impression - Improvement. The CGI-I score is an indication of the degree of improvement or deterioration in a patient's illness after treatment.
CGI-S and CGI-I are measured on different scales and are based on subjective clinical judgement.

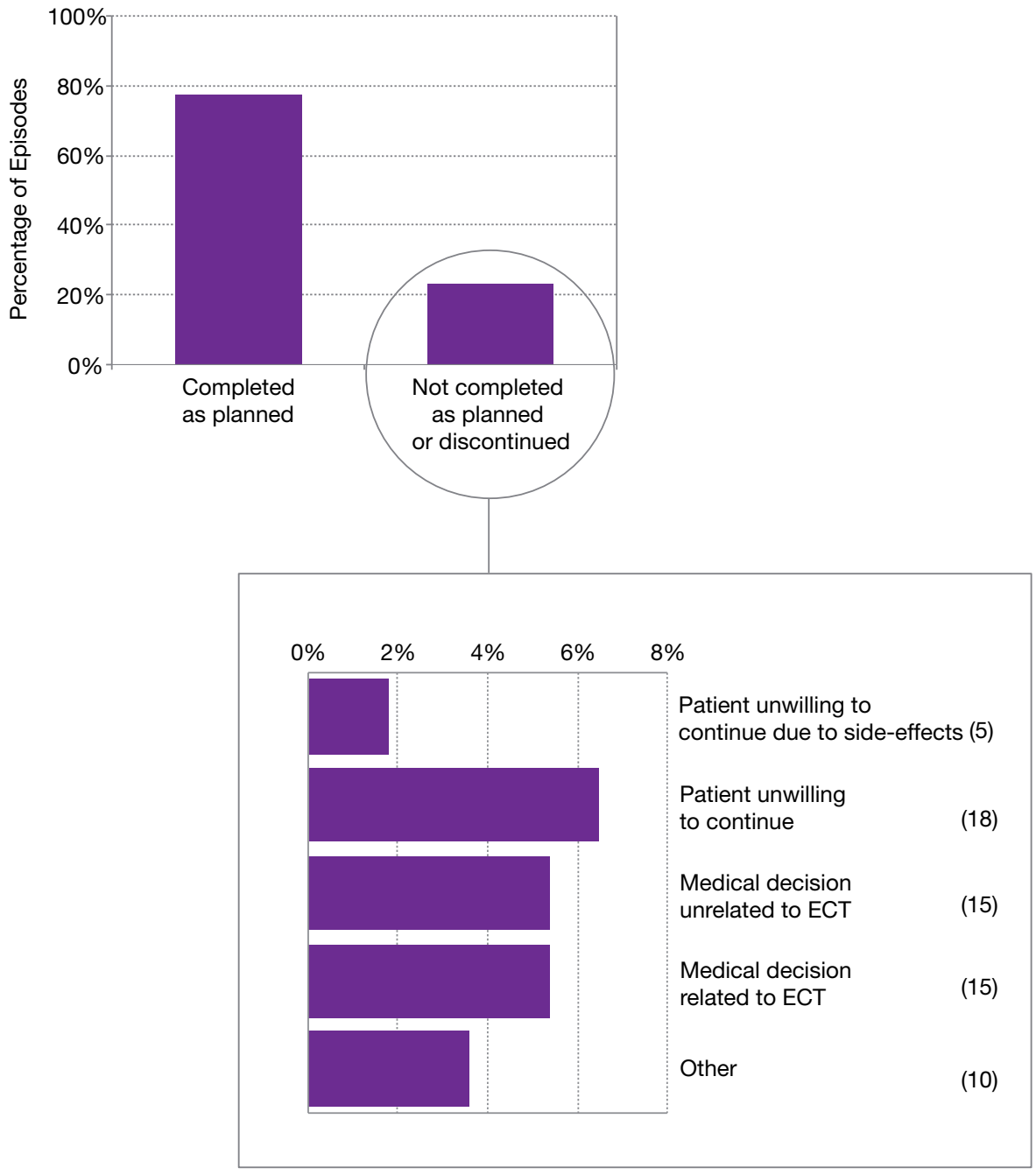
2 Possible CGI-S categories are: Normal - not ill/ Borderline mentally ill/ Mildly ill/ Moderately ill/ Markedly ill/ Severely ill/ Extremely ill.

3 Possible CGI-I categories are: Very much improved/ Much improved/ Minimally improved/ No change/ Minimally worse/ Much worse/ Very much worse.

4 The absence of a CGI-I category from the chart indicates there were no patients in that category.

5 The chart is based on completed episodes with complete CGI-S entry and CGI-I exit scores.

Figure 5.4: Percentage (and number) of episodes completed as planned or discontinued, by reason for discontinuation (2015)



Section 6 Service Users and Carers Reference Group

This year seems to have flown by after last year's somewhat eventful annual meeting in Edinburgh along with its fire evacuation just as I was about to speak.

It has been difficult to arrange reference group meetings over the last year due to difficult personal circumstances and illness for many people involved in the reference group. A real priority over the next year will be regrouping and re-energising the group, but we would really welcome new interest and members to join the reference group so that we can continue to influence SEAN and ensure the ECT clinicians in Scotland continue to engage effectively with patients and carers.

The SEAN CONECTS LearnPro module is a continuing success, being the UK's first online ECT module for ward and escort nurses. Thus far 5,267 nurses are accessing the module and 1,561 have completed it and passed. This clearly demonstrates the quality improvement aspects of SEAN and the importance of listening to patient and carers lived experience. Completion of the module should ensure that any patient undergoing an episode of ECT is able to be properly supported by ward and escort nurses before, during and after treatment.

It is also good to hear that the Langhill Support group for people with lived experience of ECT has been meeting regularly in Inverclyde supported by ACUMEN, Isobel Kerr at Your Voice and the ECT Team at Langhill Clinic from Inverclyde Royal Hospital. This provides a great learning opportunity for all participants involved and I hope we can facilitate opportunities to further develop this type of group in the future.

Linda Cullen and I ran a workshop at this year's Bipolar Scotland Conference back in September. Although the numbers attending the workshop were small, it was a great opportunity to talk with people about their experiences, and I would be really interested to look at how we can have more conversations with groups like this over the coming year.

We have also had early stage discussions about research priorities for both clinicians and people with lived experience. Following a series of discussions with Professor Keith Matthews at the University of Dundee, we plan to arrange a meeting with the Reference Group either before the end of the year, or early next year, to explore possible areas for research. The aim is to co-produce at least one research proposal that will fully involve patients, and their priorities, in a meaningful way. As always we would welcome thoughts from patients and carers on what they feel would broaden our understanding of ECT treatment and would improve the patient experience and the outcomes that treatment can have on a person's life and that of their family.

One area that comes up in every conversation I have on ECT is that of adverse effects. We need to better understand these and to look for solutions. Many people report that ECT impairs their autobiographical memory – their ability to remember experiences in relation to a certain time and place.

Recently, a clinical research team in Ireland trialled a different way of administering ECT and found that reported side effect were reduced by changing the electrode positions. There were concerns that this would be a less effective treatment, but, at least within this small trial, this did not appear to be the case. We welcome any work that aims to minimise adverse effects and improves patient experience.

Capacity and consent to ECT also remains an area of concern for the general public. Recently major discussions have taken place in Ireland regarding capacity and protecting patients' rights. The decision that someone does not have capacity to consent to any medical treatment is an important one and is of fundamental relevance to the safe and effective practice of ECT and the maintenance of public confidence in procedures. We look to continue to develop our discussions with the Mental Welfare Commission and with SEAN and wider ECT communities around these issues and those of advance statements and supported / assisted decision making practices.

As always we look forward to seeking new ways in which we can work together with SEAN, with mental health services and beyond, to explore ways that ensure service users and carers can have a voice that is heard and understood.

Chris White
(SEAN Reference Group Chair)

Section 7 Accreditation

In May 2009 SEAN commenced accreditation visits to all clinics delivering ECT in Scotland. An initial pilot of the system was carried out over the period of one year. This was then reviewed and adaptations made to improve the efficiency and provide more timely feedback to clinics. The accreditations were carried out against a set of national standards which had been designed to be specific and measurable and as such to provide meaningful information on which to base accreditation assessments. In 2012 the first round of results were published in the SEAN annual report[18].

In November 2013 SEAN Standards were reviewed and updated according to the latest evidence. The levels of criteria within each standard were also reviewed and some criteria were increased from additional good practice (Level 2) to mandatory practice (Level 1). The benchmark for achieving "Accreditation with Excellence" was also increased from 90% to 95% of Level 2 criteria.

Informing each standard were the elements outlined in various good practice statements:

- The Royal College of Psychiatrists handbook on ECT (3rd Edition)[6]
- NHS Quality Improvement Scotland (2003) Clinical Standards Anaesthesia - Care Before, During and After Anaesthesia[19]
- The Royal College of Anaesthetists (2011) Anaesthetic Services in Remote sites[20]
- NICE guidelines as endorsed by the Health Technology Board for Scotland[13,14]
- Royal College of Anaesthetists (2013) Guidelines For The Provision of Anaesthetic Services[7]
- Association of Anaesthetists of Great Britain and Ireland (2013) Immediate Post-anaesthesia Recovery[8]
- Person centred measures of quality as fed back to SEAN since the national audit of 1997.

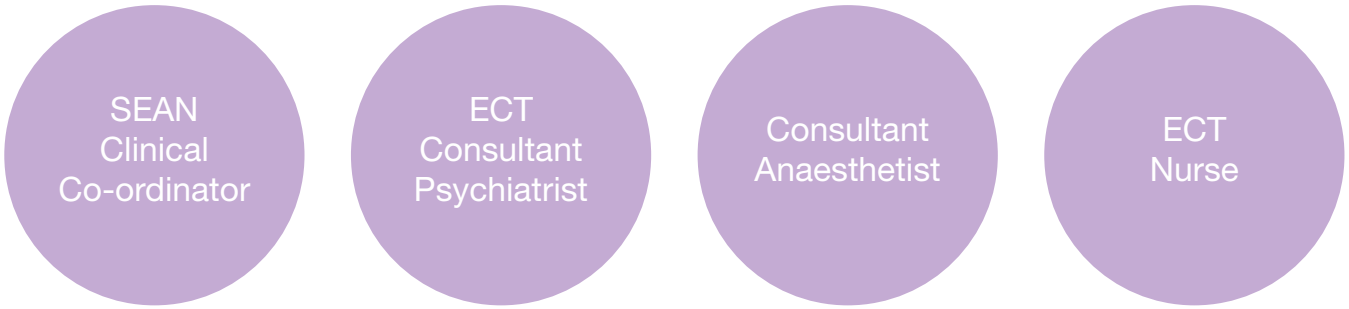
Methodology

Following a review of the Accreditation process it was decided that we would not only undertake to carry out the announced visits but we would follow this up with an unannounced visit to concentrate on a specific aspect for improvement which had been flagged up at the announced visit. Individuals may question why all the visits are not unannounced: this is because when we carry out the announced visit, the accreditation team actually observe ECT being given to a patient. As there are not always patients at each session in some clinics, it would not be a cost effective use of clinicians' time to turn up and not actually observe the practice at the clinic. It is hoped that this new methodology not only enhances the previous system but will also reassure the public that areas for improvement are being addressed.

Announced Visits

Eight weeks before the visit clinics are informed of the date the visit will take place and a training presentation is sent to the clinical team to explain the process of the visit.

The SEAN Clinical Co-ordinator attends every visit to lead the team and ensure continuity and correct interpretation of the criteria within the standards. The accreditation team is made up of a team of individuals drawn from the SEAN clinical network, to ensure that all members are currently practicing ECT:



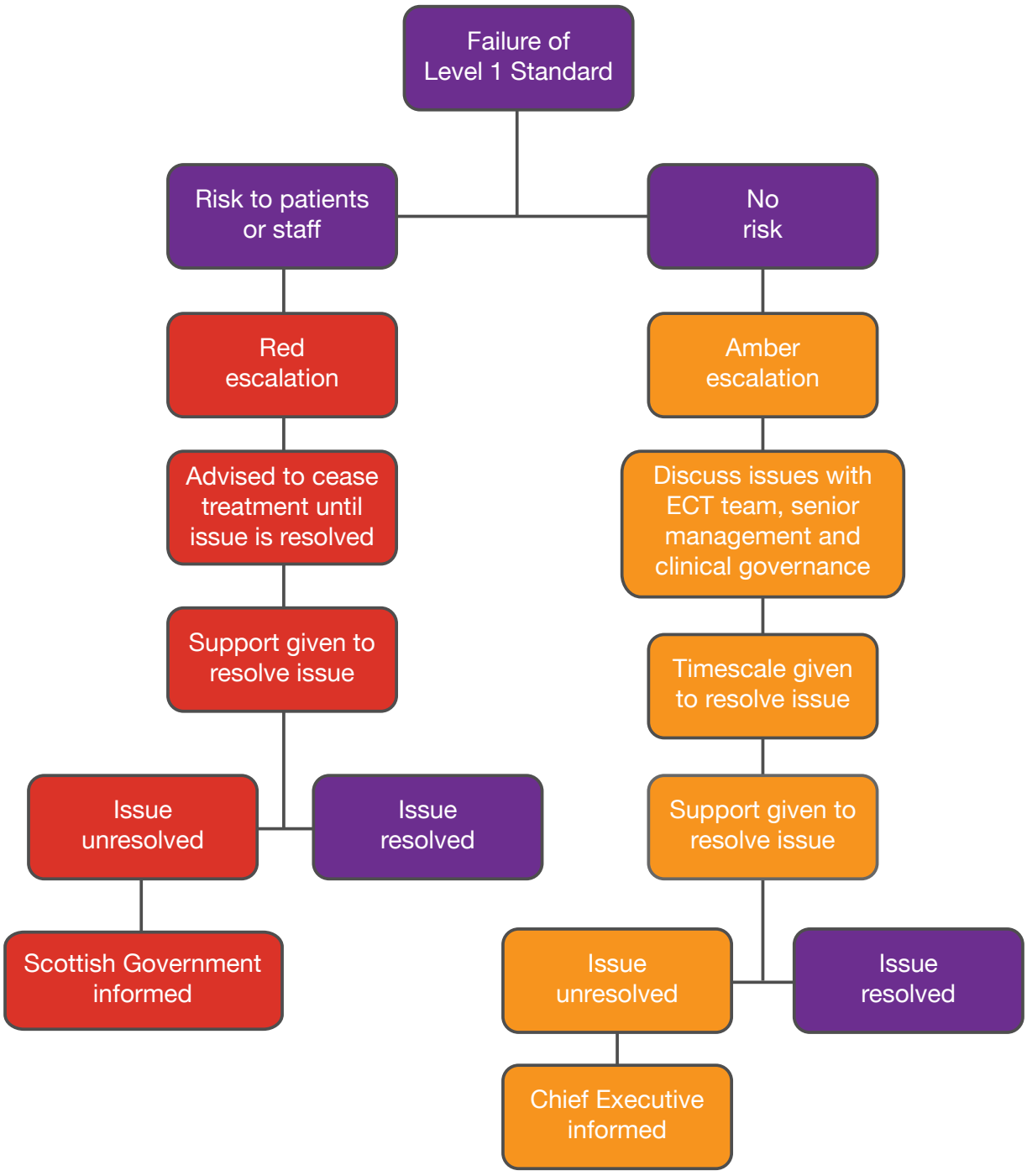
On the day of the announced visit

The accreditation team arrive at the clinic one hour before treatment commences in order to inspect the facilities and equipment. Each member of the team is interviewed by their peer on the accreditation team.

Where possible and appropriate, treatment and recovery are observed by each member of the accreditation team. This is of course at the discretion of the patient and ECT team. When the treatment session is complete the accreditation team retire to discuss their initial findings. Informal verbal feedback is then given to the ECT team to allow them to continue with their normal working day. The accreditation team then write the draft report which contains timescales and recommendations for improvements. At the end of the visit there is a formal feedback session with the ECT team, representatives from senior management and clinical governance.

In the event that a failure of a Level 1 mandatory standard is identified, which is deemed to be a risk to patients or staff, an escalation policy is followed (Figure 7.1)

Figure 7.1: SEAN Accreditation Flow Diagram



The SEAN team offers support and guidance to the clinical teams and senior management to resolve and issues identified and will also support ECT Teams to explore ways of achieving any recommendations.

The ethos of SEAN is to move away from the 'blame culture' and provide a more supportive approach to identifying areas for improvement, working collaboratively with ECT teams, patients and carers to achieve the optimal care for patients receiving ECT in Scotland.

Examples of how these visits achieve patient centred improvements in safety and effectiveness are:

- Securing staff trained to specific national standards
- Increasing the availability of appropriate monitoring and emergency equipment
- Revision of treatment protocols to ensure they reflect the most up to date evidence based practice.

Unannounced visits

Following the announced visit a follow up unannounced visit will take place. The clinical co-ordinator will arrive without prior notification at a clinic on a treatment day to ensure that any areas for improvement identified at the announced visit have been addressed. These visits have no timescale and are carried out as an ongoing process.

The Accreditation level awarded is based on criteria agreed by the SEAN Steering Group:

Accredited with Excellence	Accredited	Accreditation deferral	Accreditation not achieved

Overall the standard of care and treatment across Scotland is high; however there is always room for improvement and further development. The aim of SEAN is to strive for clinical excellence; with this in mind the Steering Group in conjunction with the Service Users and Carers Reference Group agreed that the standard to achieve Accreditation with Excellence should be set at a higher level for this round of visits.

Table 7.1 below lists the accreditation level of the individual hospitals participating in SEAN and shows that all hospitals achieved accreditation, demonstrating the high standard of delivery of ECT in Scotland.

It is important to note that the level of criteria required to achieve "Accreditation with Excellence" is now more demanding and has been increased in two ways:

1. **Several of the previous Level 2 criteria were upgraded to Level 1 Mandatory Criteria.**
2. **Previously, clinics had to achieve 100% of Level 1 criteria and 90% of Level 2 criteria to obtain "Accreditation with Excellence" but now 95% of Level 2 criteria must be attained to achieve the same award.**

Standards to achieve Accreditation at ECT in Scotland are the highest in the UK. We are delighted to say that 100% of hospitals achieved “Accreditation” 89% of which achieved “Accreditation with Excellence”. Therefore despite the higher standards required to achieve “Accreditation with Excellence” 89% of clinics achieved Excellence which is 5% more than the previous round of visits.

Table 7.1: SEAN Accreditation Results

Hospital	Accreditation Award
Argyll & Bute	Accredited
Carseview	Accredited with Excellence
Forth Valley Royal	Accredited with Excellence
Hairmyres	Accredited with Excellence
Huntlyburn	Accredited with Excellence
Inverclyde	Accredited with Excellence
Leverndale	Accredited with Excellence
Midpark	Accredited with Excellence
Murray Royal	Accredited with Excellence
New Craigs	Accredited with Excellence
Queen Margaret	Accredited with Excellence
Royal Cornhill	Accredited with Excellence
Royal Edinburgh	Accredited
St John’s	Accredited with Excellence
Stobhill	Accredited with Excellence
Susan Carnegie	Accredited with Excellence
Wishaw	Accredited with Excellence
Woodland View	Accredited with Excellence

Notes:
1. In 2016 Ailsa & Crosshouse clinics moved to Woodland View Hospital, reducing the number of treating hospitals to 18.

Conclusions

The Scottish ECT Accreditation Network has continued to prove itself to be a valuable resource for improving the clinical delivery of ECT throughout Scotland. This has been achieved through our successful visiting programme whereby a multi-disciplinary team of professionals experienced in the delivery of ECT visit the centres in Scotland where ECT is administered. We have now completed a second round of accreditation visits to every ECT clinic in Scotland. Through these visits clinical practice is benchmarked against a set of nationally recognised, meaningful and robust standards.

Once again we are delighted that every centre in Scotland is actively involved with SEAN and recognises the importance of the organisation. Through our accreditation visiting process we have provided robust data through which all centres have been able to critically review and benchmark their practice. In doing so we have provided a backdrop and driver whereby ECT clinicians have valid data from which to initiate clinically relevant changes within their units. This can only serve to improve the quality of their service and thus patient care. On this basis as an organisation we can provide support and backing in helping clinicians striving to improve the quality of their service. Equally we have a clear protocol for highlighting failings within a service that for whatever reason are not being addressed. The ethos of SEAN, however, has always been and remains that of an organisation that will identify areas for improvement and help clinicians and managers in taking positive steps to improve practice and service delivery. By providing data to individual units, SEAN enables these units to monitor their own activities and performance against all other units in Scotland. We are also able to provide units with individual prescriber based information.

In addition, SEAN has once again demonstrated, through retrospective analysis, that ECT remains a relevant, effective and safe treatment in the management of serious, often treatment resistant, depression. Prospective naturalistic data from a purely clinical, as distinct from a research background, has now been collated for ten years and shows clearly how effective a treatment ECT is. This confirms the invaluable position of ECT as an effective treatment in modern day psychiatry.

In addition to its accreditation programme SEAN remains committed to improving inter-professional and multidisciplinary working amongst professionals involved in the delivery of ECT. Along with formal data collection and the accreditation process, SEAN has promoted the sharing of information and facilitated the development of informal communication networks between centres such that common problems can be discussed and solutions reached.

In striving towards maintaining and improving quality of care SEAN continue to successfully promote educational initiatives for professionals delivering ECT. Our annual meeting, which is open to all disciplines as well as users, remains very well attended, and takes on a true multidisciplinary educational focus. In addition SEAN continues to run an annual course for prescribers of ECT which has generated considerable interest and positive feedback from clinicians. Continuing education for nursing staff is available through the LearnPro module for all mental health nurses, which has attracted extremely positive feedback and is currently being utilised in all centres in Scotland.

A critical role of SEAN has always been, and remains as an absolute necessity, the need to involve and consult users. SEAN continues to support and encourage the national users group through which relevant criticism and feedback regarding all issues of ECT treatment are obtained and seriously listened to. The importance of a users group and the relationships that have been

established between clinicians and users remains core to the very ethos and principles behind SEAN.

Ultimately therefore SEAN remains focused and committed through a patient centred approach to promote the delivery of ECT in a safe environment and to continue to demonstrate that ECT remains an effective treatment available for some of the most seriously ill patients within the mental health service.

We remain grateful to NHS ISD for their continuing invaluable support that has helped SEAN in achieving its goals and we look forward to further increasing the standards of ECT care in the coming years.

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References

1. Scottish Government (2010) The Healthcare Quality Strategy for NHS Scotland. Scottish Government.
2. Montgomery S.A., Asberg M. (1979) "A new depression scale designed to be sensitive to change", British Journal of Psychiatry, 134: 382-89.
3. Guy W. (ed.) (1976) ECDEU Assessment Manual for Psychopharmacology. US Department of Health, Education, and Welfare Public Health Service Alcohol, Drug Abuse, and Mental Health Administration.
4. CRAG Working Group on Mental Illness (2000) National Audit of Electroconvulsive Therapy (ECT) in Scotland. Scottish Executive Health Department, Clinical Resources and Audit Group.
5. Scottish ECT Accreditation Network (SEAN) (2013) SEAN Standards, ISD Publications.
6. Royal College of Psychiatrists (2013) The ECT Handbook (3rd ed.) Royal College of Psychiatrists.
7. The Royal College of Anaesthetists (2013) Guidelines for the Provision of Anaesthetic Services. Royal College of Anaesthetists.
8. Association of Anaesthetists of Great Britain and Ireland. Immediate Post-anaesthesia Recovery 2013. Anaesthesia 2013; 68: pages 288-97.
9. ISD Scotland (2012) ISD Statistical Disclosure Protocol [online]. Available from: http://www.isdscotland.org/About-ISD/Confidentiality/disclosure_protocol_v3.pdf.
10. National Records of Scotland (2015) Mid-year Population Estimates for Scotland [online]. Available from: http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/mid-year-population-estimates.
11. Scotland's 2011 Census – Standard Outputs [online]. Available from: http://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html.
12. World Health Organization (1992) International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Volume 1, World Health Organization.
13. National Institute for Clinical Excellence (2003) Guidance on the Use of Electroconvulsive Therapy (Technology Appraisal 59). National Institute for Clinical Excellence.
14. National Institute for Health and Clinical Excellence (2009) Depression: the treatment and management of depression in adults (Clinical Guideline 90). National Institute for Health and Clinical Excellence.
15. The American Society of Anesthesiologists (1963) "New classification of physical status", Anesthesiology 1963; 24:111.
16. Schreiber, J.U., Lysakowski, C., Fuchs-Buder, T., Tramèr, M.R.(2005) "Prevention of succinylcholine-induced fasciculation and myalgia: a meta-analysis of randomized trials", Anesthesiology, 103(4); 877-84.
17. Rush A.J., Trivedi M.H., Wisniewski S.R. et al(2006) Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR*D Report, American Journal of Psychiatry, 163: 1905-17.
18. Scottish ECT Accreditation Network (SEAN) (2012) Annual Report 2012: A summary of ECT in Scotland for 2012. ISD Publications.
19. NHS Quality Improvement Scotland (2003) Clinical Standards, Anaesthesia – Care Before, During and After Anaesthesia. NHS Quality Improvement Scotland.
20. The Royal College of Anaesthetists (2011) Anaesthetic Services in Remote sites. Royal College of Anaesthetists.

Appendix A

Management Committee Membership

Mr Stuart Baird	Service Manager (ISD)
Mrs Linda Cullen	SEAN Clinical Co-ordinator (ISD)
Dr Alistair Hay (Chair)	Consultant Psychiatrist (Highland)
Dr Nasim Rasul (Vice Chair)	Consultant Psychiatrist (Ayrshire & Arran)

Service Users and Carers Reference Group Membership

Mr Thomas Byrne (Co-Chair)	Advancing Community Understanding of Mental and Emotional Needs (ACUMEN)
Mr Chris White (Co-Chair)	CJ Mental Health Consultancy
Mrs Linda Cullen	SEAN Clinical Co-ordinator (ISD)
Representatives from:	Advancing Community Understanding of Mental and Emotional Needs (ACUMEN)
	Bipolar Scotland
	CJ Mental Health Consultancy
	Scottish Association for Mental Health (SAMH)
	Support in Mind Scotland

Report Writing Group Membership

Dr Joan Barber	Consultant Psychiatrist (Ayrshire & Arran)
Mrs Linda Cullen	SEAN Clinical Co-ordinator (ISD)
Dr Alastair Hay (Chair)	Consultant Psychiatrist (Highland)
Professor Keith Matthews	Professor of Psychiatry & Co-Director of the Division of Neuroscience at the University of Dundee
Mrs Clare McGeoch	Quality Assurance Manager (ISD)
Dr Gary Morrison	Executive Director (Medical) Mental Welfare Commission for Scotland
Dr Charles Morton	Consultant Anaesthetist (Lothian)
Mr David Murphy	Senior Information Analyst (ISD)
Mr Martin O'Neill	Principal Information Analyst (ISD)
Dr David Semple	Consultant Psychiatrist (Lanarkshire)

Steering Group Membership

Dr Virginica Anderson	Consultant Anaesthetist (Grampian)
Mr Stuart Baird	Service Manager (ISD)
Dr Dallas Brodie	Consultant Psychiatrist (Greater Glasgow & Clyde)
Mrs Julie Burnside	ECT Nurse (Highland)
Mrs Linda Cullen	SEAN Clinical Co-ordinator (ISD)
Dr Alistair Hay (Chair)	Consultant Psychiatrist (Highland)
Dr Nasim Rasul (Vice-Chair)	Consultant Psychiatrist (Ayrshire & Arran)
Mr Stephen Kelly	ECT Nurse (Greater Glasgow & Clyde)
Dr Johan Leuvennink	Consultant Psychiatrist (Dumfries)
Dr Gary Morrison	Executive Director (Medical), Mental Welfare Commission for Scotland
Dr Grant Forrest	Consultant Anaesthetist (Fife)
Mrs Clare McGeoch	Quality Assurance Manager (ISD)
Dr Charles Morton	Consultant Anaesthetist (Lothian)
Dr Fiona Munro	Consultant Anaesthetist (Greater Glasgow & Clyde)
Mr David Murphy	Senior Information Analyst (ISD)
Mr Martin O'Neill	Principal Information Analyst (ISD)

Appendix B

Prescribing Hospitals

Hospital Name	Location	NHS Board	Data Issue(s)
Ailsa & Crosshouse Hospitals	Ayr and Kilmarnock	Ayrshire & Arran	
Airbles Road Centre	Motherwell	Lanarkshire	Prescribed episodes from 2011 onwards included in data from Wishaw General Hospital.
Argyll & Bute Hospital	Lochgilphead	Highland	
Beckford Lodge	Hamilton	Lanarkshire	All prescribed episodes included in data from Wishaw General Hospital.
Carseview Centre (Ninewells Hospital)	Dundee	Tayside	
Coathill Hospital	Coatbridge	Lanarkshire	All prescribed episodes included in data from Wishaw General Hospital.
Dr Gray's Hospital	Elgin	Grampian	Prescribed episodes from November 2010 onwards included in data from Royal Cornhill Hospital.
Dunnikier Day Hospital (Whyteman's Brae)	Kirkcaldy	Fife	Prescribed episodes from November 2011 onwards included in data from Queen Margaret Hospital.
Dykebar Hospital	Paisley	Greater Glasgow	Prescribed episodes from November 2008 included in data from Leverndale Hospital.
Forth Valley Royal	Larbert	Forth Valley	New facility replacing Falkirk & District Royal Infirmary.
Gartnavel Royal Hospital	Glasgow	Greater Glasgow	All prescribed episodes included in data from Stobhill Hospital.
Hairmyres Hospital	East Kilbride	Lanarkshire	
Huntlyburn, Borders General	Melrose	Borders	
Inverclyde Hospital	Greenock	Greater Glasgow	
Leverndale Hospital	Glasgow	Greater Glasgow	
Midpark Hospital	Dumfries	Dumfries & Galloway	New facility replacing Crichton Royal Hospital.
Midlothian Community Hospital	Bonnyrigg	Lothian	Prescribed episodes from 2011 onwards included in data from Royal Edinburgh Hospital.
Monklands District & General Hospital	Airdrie	Lanarkshire	All prescribed episodes included in data from Wishaw General Hospital.
Murray Royal Hospital	Perth	Tayside	
New Craigs Hospital	Inverness	Highland	

Hospital Name	Location	NHS Board	Data Issue(s)
Parkhead Hospital	Glasgow	Greater Glasgow	All prescribed episodes included in data from Stobhill Hospital.
Queen Margaret Hospital	Dunfermline	Fife	
Royal Alexandra Hospital	Paisley	Greater Glasgow	Prescribed episodes from November 2008 included in data from Leverndale Hospital.
Royal Cornhill Hospital	Aberdeen	Grampian	
Royal Edinburgh Hospital	Edinburgh	Lothian	
Southern General Hospital	Glasgow	Greater Glasgow	All prescribed episodes included in data from Leverndale Hospital.
St John's Hospital	Livingston	Lothian	
Stobhill Hospital	Glasgow	Greater Glasgow	
Stratheden Hospital	Cupar	Fife	Prescribed episodes from November 2011 onwards included in data from Queen Margaret Hospital.
Susan Carnegie	Montrose	Tayside	New facility replacing Sunnyside Royal Hospital.
The State Hospital	Carstairs	Lanarkshire	
Udston Hospital	Hamilton	Lanarkshire	All prescribed episodes included in data from Hairmyres Hospital.
Vale of Leven Hospital*	Alexandria	Greater Glasgow	Prescribed episodes from 2007 included in data from Stobhill Hospital.
Western Isles Hospital*	Stornoway	Western Isles	Prescribed episodes from 2007 included in data from Leverndale Hospital.
Whyteman's Brae	Kirkcaldy	Fife	Included in data for Queen Margaret Hospital.
Wishaw General Hospital	Wishaw	Lanarkshire	

Note:
* Not included as a separate treating hospital in Table 1.1 due to database issues.

Treating Hospitals

Hospital Name	Location	NHS Board	Data Issue(s)
Ailsa & Crosshouse Hospitals	Ayr and Kilmarnock	Ayrshire & Arran	
Argyll & Bute Hospital	Lochgilphead	Highland	
Carseview Centre (Ninewells Hospital)	Dundee	Tayside	
Forth Valley Royal	Larbert	Forth Valley	New facility replacing Falkirk & District Royal Infirmary.
Hairmyres Hospital	East Kilbride	Lanarkshire	Data not available from January to June 2008 because of IT problems.
Huntlyburn, Borders General	Melrose	Borders	
Inverclyde Hospital	Greenock	Greater Glasgow	
Leverndale Hospital	Glasgow	Greater Glasgow	
Midpark Hospital	Dumfries	Dumfries & Galloway	Data not available from November 2006 to September 2008 because of staffing problems. New facility replacing Crichton Royal Hospital.
Murray Royal Hospital	Perth	Tayside	
New Craigs Hospital	Inverness	Highland	
Queen Margaret Hospital	Dunfermline	Fife	Data not available from October 2005 to June 2007 because of IT problems.
Royal Cornhill Hospital	Aberdeen	Grampian	
Royal Edinburgh Hospital	Edinburgh	Lothian	
St John's Hospital	Livingston	Lothian	
Stobhill Hospital	Glasgow	Greater Glasgow	
Susan Carnegie	Montrose	Tayside	New facility replacing Sunnyside Royal Hospital.
Wishaw General Hospital	Wishaw	Lanarkshire	